



An Opinion based evaluation of Managerial Expertise Propounded by Dr. W. Edward Deming

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Abstract

Dr Edward Deming, Father of Quality Management, is a world renowned professional famous for his ideas on the 'System of Profound Knowledge' and the '14- Point Deming Philosophy'. This paper aims to highlight the attitude of new generation managers and teachers regarding the applicability of this expert knowledge in their respective areas of work for strategic advancement. The survey was conducted among 100 managers and 100 teachers selected at random. The result of the survey was surprising. Teachers, who were not even aware of this personality and his expertise, showed a positive inclination towards the application of these principles for their career growth alike that of the managers, majority of whom knew about Dr. Edward Deming and his principles. The survey was useful in highlighting the relevance of applying the Deming's System of Profound Knowledge and 14 Point Philosophy among the teachers' folk just in the same way, it is done among managers. This survey report would prove fruitful for those educational institutions that would take notice of this matter and initiate and monitor its application, among teachers and thereby help the teachers to achieve a competitive advantage which would ultimately help the institution to flourish in today's strategic environment.

Keywords: Deming's System of Profound knowledge, Deming's 14- point philosophy, new generation teachers, Strategic career advancement.

Introduction

"A manager must teach himself to tactfully choose between the right stuff and the wrong stuff. A teacher, on the contrary, must know to tactfully manage the right stuff and the wrong stuff".

The above quotes would definitely make anyone think about the interconnected roles of a manager and a teacher. Teachers teach and develop managers. These managers later set up the conditions or systems where teachers have to grow and flourish. This research paper mainly highlights the increasing role of teachers in this strategic environment where they have to function more like managers and tactfully deal with a lot of matters than what they used to do in the traditional system of teaching. In earlier days, the teachers just had to impart knowledge. But the present day teachers must manage lots of matters if they have to shine themselves in the execution of their versatile role. This study aims at throwing light on the above matter and also proves with sufficient data, the fact that alike the managers, the teachers also have become quality conscious now days with respect to the curriculum, the syllabus and even with regard to the classroom management. Modern day teachers have realised about the versatility in the role that they have to take up once they are employed as teachers in competitive world today. They have shown keen interest to the knowledge propounded by Dr W Edward Deming, and majority of the respondents have shown consent to the fact that the application of the philosophies put forth by this managerial expert would

definitely bring laurels to them and help them gain competitive advantage while proceeding in their career. This research paper provides an idea to the employers in the educational institutions of today that, if they give due attention to this matter and encourage teachers to know more about the philosophies propounded by such Quality Gurus, then these teachers can very well develop a Core Competency in them comparable to even international standards which will in the long run, prove fruitful to the employer concern itself, directly or indirectly.

Relevance of the Study: The number of educated - job seekers have increased tremendously over the past years. There are fresh graduates coming up every day with fresh ideas in their specialised areas. As a result, there is tough competition in the job market. Concerns look for those persons who can do maximum works, qualitatively, and help the concern attain its vision successfully. These concerns would easily replace their personnel possessing low quality, with that of high quality. This compels the existing employees of any organization (teachers and managers are no exception) to adopt certain strategic management tactics or tools to withstand competition and win over the competitors. This also develops in them, a core competency, or competitive advantage which enriches their value among employer concerns. Thus, only those who are able to manage quality in their personal self and in the modus operandi applied while discharging their duties in the career can have a sustainable growth in the present world of cut throat competition. The expertise knowledge provided by various

Quality Gurus help these personnel in developing a Unique Selling Proposition for their service and for themselves, and these people can develop an irreplaceable position for themselves in their concern. Among the Quality Gurus, teachings of Dr W Edward Deming are world famous and he, who is considered as the Father of Quality Management, his knowledge was subjected to this present study. Teachers were chosen along with managers for this survey because literatures reveal that in today's world almost all the teachers have to execute certain managerial functions along with mere imparting of knowledge. They must know various aspects of planning, organizing, budgeting, controlling etc as they have to even assist their organization in administrative matters as well, thus assuming an even wider and versatile role. They need to know the basics of event management, time management, stress management, human resource management, strategic management, quality management and so on. These versatile and widening roles of teachers arouse the curiosity of the researcher being an academician, to conduct and verify this aspect of managerial element present in the teachers' mindsets while discharging their career responsibilities. The researcher being a research scholar in the area of Total Quality Management in College education again was motivated to do this study, to be conducted in the light of Deming's vast Knowledge spectrum. Thus this study assumes relevance.

Research Objectives: The study aims to analyze the following objectives: i. Quality Consciousness of respondents in general, ii. Opinion of respondents about the practical viability of Deming's System of Profound Knowledge in their respective career, iii. Opinion of respondents on applicability of 14- Point Deming Philosophy, iv. Overall opinion and consensus among respondents on the above points and the relation between their opinions.

Methodology

This is basically an analytical research paper. It is conducted on the basis of opinions collected at random from a small sample group. The sample size was 100 respondents, each, from among those in the managerial cadre as well as teaching sector especially in the state of Kerala. Managers are chosen without any specific criterion regarding the department to which they belong and are basically chosen from the age group 25 to 35. New generation teachers in this study include those teaching in high schools, higher secondary schools and colleges especially of age group 25 to 35. There was no gender based classification while choosing the samples. The samples were collected at random. Structured questionnaires were used for collecting data and 5- point Likert scaling technique was used for gathering the data. The scales were duly marked as 1.Strongly Agree, 2.Agree, 3.Not sure, 4.Disagree, 5.Strongly Disagree. Tools like Mean, Standard Deviation and Co- efficient of Variance were applied for analysis purpose. Co- efficient of Correlation was calculated to check about the consensus among respondents on the applicability of Deming's wide spectrum of knowledge in

their career areas. Tables are used in the presentation of analysis results. Secondary data needed for this study were reviewed from various electronic sources and due citations are given under 'REFERENCES'.

Period of the Study: This study was conducted during January-May 2016.

Limitations of the Study: i. This is a sample survey and the results are given based on the analysis of data provided by the chosen sample. ii. The sample group was randomly chosen without any demarcation on age, gender, or any other criterion. iii. There are different factors to be considered in depth before giving a final conclusion to the topic. In this study, general attitude of respondents alone are given importance. iv. Qualitative studies always depend on and believe in the genuineness element related to supplier of information. There can be chances of personal bias as the respondents are human beings who differ in their opinions and concepts.

Literature Review: Modern day teachers assume a great role than the mere role of an educator. They can be well treated as managers and most of them realise it while they discharge their career responsibilities. Those who cannot assume that dual role (multi faceted role), cannot attain progress and even at times they will decide to quit their career because they cannot strike an equilibrium. The literatures also reveal about the changing role of teachers.

Modern day teachers have to play as managers, which is a major challenge they have to overcome. Only if these teachers of present generation have the ability to manage, can they survive. The teachers have to maintain a routine and help the students follow the same. They have to manage the study materials, classroom settings, time and above all. Teachers are responsible for managing students, rather than earlier controlling techniques, modern teachers have to use a diplomatic approach to chase and catch hold of the mind of variety of students sitting in front. More students now days have a baggage full of social, economical and family problems. Teachers must learn student psychology. Apply a 'friendly manager' approach with the students. Also, the teachers must know all the ideas of Stress Management if they have to strike a Work- Life balance¹. The changes that have taken place in the education system have brought changes to the role played by teachers.

Earlier the teachers were the major source of knowledge, but now days they are just the facilitators in disseminating knowledge that they have and that they can get from sources world- wide. Present day students are well aware of the technology and they know how to track information, but that must not reduce the role of teachers. They have to help the students to manage the resources that they can make use of and help the student to develop as visionaries. Present day teachers are supporters rather than mere educators. More than mere teaching, the teachers of this century are doing a lot. They are

better planners, designers, organizers, executors, event managers, disaster managers and what not. Present day teachers must manage their career by updating themselves in subject areas as well as related to technological matters. The matter that must be checked is whether the teachers realise this managerial role and are ready to take it up and execute it with full vigour². Modern day teachers must help the students in their learning process. For that first of all they must have an inventory management system where the students are considered as the inventory. Then they must do a self evaluation and do their own SWOT analysis.

The new generation teachers must relate their teaching skills with the modern class room management skills. Teachers must work hard to find what is best for their personality as well as for their curriculum. The traditional advice that teachers not overextend with a cluster of all-inclusive teaching styles might seem to conflict with today's prominence on student-centered classrooms. Theoretically, the more teachers accentuate student-centric learning the harder it is to develop a well-focused style based on their personal attributes, strengths and goals. In short, modern methods of teaching call for different nature of teachers — from the analyst/organizer to the negotiator/consultant³. Today, the seeds of such a dramatic transformation in education are being planted. Incited by considerable revolutions in knowledge, information technology, and public demand for better learning, schools nationwide are slowly but surely restructuring themselves. Leading the way are thousands of teachers who are rethinking every part of their jobs -- their liaison with students, colleagues, and the community; the tools and modus operandi they employ; their rights and responsibilities; the form and content of curriculum; what standards to set and how to measure whether they are being met; their preparation as teachers and their ongoing professional progress; and the very structure of the schools in which they work. In short, teachers are reinventing themselves and their profession to better serve schools and students. The day-to-day job of a teacher, rather than broadcasting content, is becoming one of designing and channeling students through engaging learning prospects. These literatures give descriptive ideas about the changing roles of teachers whereas this study aims to survey about what teachers in general opine about this managerial role that they have to play and how they think Deming's System of Profound Knowledge and Deming Philosophy are applicable in their effective discharge of this managerial role⁴.

The 21st Century managers also experience certain changes in executing their duties. They are supposed to act strategically in today's competitive world. The following are some of the points that are worthy to take note of in this connection. Traditional Management approaches were laid on the feeling that the world will remain unchanged for a long span of time. But world today is really dynamic, changing at one point or the other in every fraction of a second. Earlier managers were mere people watchers, rather than being facilitators which will not work among new general human resources. New generation

employees want their potential to be fully realized, their intellectual property valued and the pattern of work itself to be changed. Today's business environment is not at all predictable. Managers alone cannot win by playing a monopolistic role. The brain wealth of all employees must be pooled. Modern managers need to be innovators, they must be able to be pro active, and they must try to jump over or go around the hurdles and above all persevere to achieve end results⁵. Researchers feel that there is a need for a shift in the mindsets of all organizations where human resources are employed. All of them need to adopt 'work together' concept. If that concept is developed then people feel at ease to work in such organizations, they will be interested to share their intellectual wealth also. They will themselves feel comfortable and they willingly will try and make others feel comfortable with each other and work towards attainment of organizational goals⁶. A manager's job is no more that of a watch dog, a slave driver, nor that of a policeman. It has undergone drastic changes. Managers have to develop a more supportive work environment and help each employee to become more productive. New generation employees need a more supportive and caring management style. To succeed in today's competitive world, an organization must win the hearts of its employees who will then wilfully work for their organization. The details of managing today are moving toward finding ways to better help and support the people who are serving the organization's customers and keeping the organization in business⁷. The modern manager needs to get work done through engaged, self-managing knowledge workers, who are a far cry from the "hired hands" of the industrial age.

The conventional managerial functions of planning, organizing, directing and controlling become a shared activity or ones that are completely delegated, depending on the context. Management adapts to meet current needs rather than hangs on to obsolete industrial-age preconceptions⁸. Modern Management can be defined as a way of achieving goals that add the most value. It's about being sufficiently organized to identify the right goals and the best means for achieving them. These literatures reveal the researcher's opinions on the changing managerial roles. This study aims at collecting the manager's opinions along with that of teachers, on this changing role and their opinion on the applicability of the Deming philosophy and Deming's System of Profound Knowledge in executing their varied modern role⁹.

Regarding the importance of Deming philosophy and Deming's System of profound Knowledge also there are various literatures that can be reviewed. Review results of a few of them are as follows: Dr Deming's ideas, the 14- point philosophy serves as Management Guidelines. These points are useful in developing an atmosphere that creates an efficient workplace, higher profits, and increased productivity. The points specified by Edward Deming may be common or obvious but it has to be embedded in one's organizational work culture. Dr Deming's ideas of hard work, sincerity, decency and personal

responsibility, forever have changed the world of management. The teachings of Dr Deming have affected a quality revolution in places where they were put to practice¹⁰. Deming suggests that transformation must be initiated by the top management, because they are the leaders, they can influence. They must make the middle and lower level managers and employees involve in their new policy executions as complete co-operation is essential on a continuous basis for development of the concern, remarks Dr W Edward Deming. Deming also tells that Top management must see things in a new light for transformation to occur. Another point worth attention is that Management must always strive for delighting customers and workers rather than thinking of profits alone, if they aim at long term success¹¹.

Andrea Gabor wrote, “Deming’s work has important implications for education: First, it is based on management (everyone from principals to education bureaucrats) recognizing its responsibility for creating a climate conducive to meaningful improvement, including, building trust and collaboration, and providing the necessary training; this involves hard work, Deming admonished, not quick-fix gimmicks, incentives or threats. Second, for many teacher advocates, it means dropping the defensive-education-is-good-enough-posture and embracing a mindset of continuous improvement; it also may mean adopting union contracts that mirror the professional practices of many teachers and are based on more flexible work rules. (Though not the unsustainable sweat-shop hours that is common at many charters) Third, by ending the finger-pointing and building a more collaborative approach to improvement, schools and districts could create cultures that are far more rewarding and productive for both children and educators¹².”

Results and Discussion

The survey produced the following results.

Quality Consciousness: An initial attempt was made to check the quality consciousness of respondents in general by asking them to give their opinions on the following six different statements. i. Quality Management is the buzz word now days in all fields. ii. Quality must be given prior importance while taking decisions on introducing any modern teaching/ managing method. iii. In the present scenario, customers are very much demanding. iv. Education/ Management was earlier a mere service of teaching/ managing affairs, but now a day lot changes have happened and strategic improvements have become essential due to increasing commercialisation in all fields. v. There have been wide changes in the role of a teacher and manager, and career demands a lot from both of them. vi. It’s a requirement for present day teachers to know/ have a base in Management subjects as well because there are lots of application in their work field. Even managers have to learn a lot about expertise knowledge supplied by various Quality Gurus and Management professionals.

The survey results were analysed as under:

Table-1
Table showing analysis of ‘Quality Consciousness’ of respondents in general

Scale of Measurement (x)	*Response of Managers (in number) [f 1]	*Response of Teachers (in number) [f 2]
Strongly Agree	170	368
Agree	356	221
Not Sure	64	11
Disagree	7	0
Strongly Disagree	3	0
TOTAL	600	600
Average (Mean)	1.87	1.41
Standard Deviation (σ)	0.68	0.68
Coefficient of Variation (C O V)	36.56%	34.88%
Coefficient of Correlation (r)	0.99	

Source: Questionnaire, Sample Size: 100 each, (*Response given in number, is the aggregate score after verifying the response for all the six statements)

Interpretation: The analysis results as depicted above clearly shows that both teachers and managers are quality conscious in general. Vast majority of the managers and teachers have shown a positive attitude to the statements. Most of them have either “Strongly Agreed” or “Agreed” to the statements which mean that they are alert and are conscious about quality aspects in the teaching/ management areas. Regarding teachers, none have a disagreement to the above statements which proves that teachers, being propagators of knowledge, always stand for quality. Another notable fact is that, there exists a positive correlation between the opinions given by managers and teachers which describes that even the teachers have started thinking more like managers in the present scenario with regard to the quality aspects, its maintenance, customer satisfaction etc. The Coefficient of Variation shows that the opinions of managers are more variable than that of teachers if the study would be conducted on a large scale covering entire population.

Opinion of respondents about the practical viability of Deming’s System of Profound Knowledge in their respective career: In this regard, 4 statements which are exactly related to Deming’s System of Profound Knowledge were put forth before them on which they were asked to give their opinions. i. Usually

evaluate and appreciate the existing system (For teachers- the education system and for managers- the present business management systems), ii. Understand the variations happening in the respective systems to which they belong and accordingly prepare oneself and one's colleagues/ subordinates for meeting the changes. iii. Observe the changes happening in the area of operation, notice the innovations coming up, refer to the knowledge provided by experts in the areas, and impart the novel ideas in one's workspace. iv. Observe the changing psychology of parent- student folk (in the case of teachers) and that of superiors, subordinates and stakeholders (in case of managers).

These statements were set after studying the 4 main points projected by Deming's System of Profound Knowledge which are¹³: i. Appreciation for a system, ii. Knowledge about the variations in the system, iii. The Theory of Knowledge, iv. Knowledge of Psychology.

The survey results were analysed as under:

Table-2

Table showing Opinion of respondents about the practical viability of Deming's System of Profound Knowledge in their respective career

Scale of Measurement (x)	*Response of Managers (in number) [f 1]	*Response of Teachers (in number) [f 2]
Strongly Agree	91	213
Agree	290	176
Not Sure	15	11
Disagree	3	0
Strongly Disagree	1	0
Total	400	400
Average (Mean)	1.83	1.50
Standard Deviation (σ)	0.54	0.55
Coefficient of Variation (C O V)	29.51%	36.67%
Coefficient of Correlation (r)	0.99	

Source: Questionnaire, Sample Size: 100 each, (*Response given in number is the aggregate score after verifying the response for all the four statements)

Interpretation: The analysis results reveal that it is the majority of teachers who have 'Strongly agreed' to the practical viability of Deming's system of Profound Knowledge. They felt it necessary that the present systems must be constantly evaluated

and appreciated, changes noted down and appropriate measures taken to overcome problems or novel and innovative ideas to be timely selected, knowledge of experts thoroughly referred to and psychology of student- parents folk to be clearly analysed. This shows that today's teachers are very alert in satisfying customer folk by adopting themselves, various innovative techniques. In short, these respondents (majority) came within the purview of Deming system.

Opinion about applicability of Deming's 14- point philosophy for career advancement: In this regard, the 14 points put forth by Dr W Edward Deming, under the Deming Philosophy, was highlighted and opinions were gathered on its applicability, from both teachers and managers' view points, for helping in attaining career growth in this world of tight competition. The 14 points were as under: i. Create Constancy of purpose, ii. Adopt the new philosophy, iii. Stop depending on inspections to check quality, iv. End the practice of awarding business on price tag alone, v. Improve constantly and forever the system of production and service. vi. Institute training on the job, vii. Institute leadership, viii. Drive out fear, ix. Break down barriers between departments and individuals, x. Eliminate the use of slogans, xi. Eliminate the work standards on the work floor, xii. Remove barriers to the pride of workmanship, xiii. Institute a vigorous program of education and retraining, xiv. Define top management's permanent commitment to ever improving quality and productivity¹⁴.

The results could be analysed as follows.

Table-3

Table showing opinion about applicability of Deming's 14- point philosophy for career advancement

Scale of Measurement (x)	*Response of Managers (in number) [f 1]	*Response of Teachers (in number) [f 2]
Strongly Agree	271	523
Agree	1016	728
Not Sure	91	110
Disagree	20	37
Strongly Disagree	2	2
Total	1400	1400
Average (Mean)	1.90	1.76
Standard Deviation (σ)	0.61	0.72
Coefficient of Variation (C O V)	32.11%	40.91%
Coefficient of Correlation (r)	1.00	

Source: Questionnaire, Sample Size: 100 each (*Response given in number is the aggregate score after verifying the response for all the fourteen statements).

Interpretation: Both managers and teachers “Agree” to the applicability of Deming Philosophy for their strategic career advancement. Those who “Strongly Agree” to the philosophy is also there but majority are with the opinion, “Agree”. It is because of their lack of proper and perfect awareness about this expert and his philosophies, they have remarked in the survey. But it is a positive sign that only a negligible minority have disagreed to the applicability of the same. The Coefficient of Correlation reveals a positive correlation in the opinions on managers and teachers regarding the applicability of Deming philosophy in their career advancement. But there is more chance of Variability in opinion among teachers on the same, if the study is conducted on a large scale (as shown by higher Coefficient of Variation).

Interpretation: The overall analysis of opinions of managers reveals that opinions are positively correlated on the three different facets which were studied. It means that their attitude in general towards quality management and maintenance i.e, their overall quality consciousness directly affects their positioning in Deming’s System of Profound Knowledge and this directly relates with their attitude on applicability of Deming Philosophy. If on any point they have a negative attitude or disinterest then it will be reflected in their attitude on other points as well which will adversely affect their career prospects. This has to be noted by the Institutional authorities while taking decisions on policy changes. The Co efficient of Variation shows that there is more chance of variability in opinion with respect to general quality consciousness when the survey will be conducted on a large scale basis compared to the other two aspects.

Overall analysis: The opinions of teachers and managers can be analysed on an overall basis as follows:

Table-4
Table showing overall analysis of opinion given by managers

Opinion	Response		
	A. Quality Consciousness (f)	B. Deming’s System of Profound Knowledge (f)	C. Deming Philosophy (f)
Strongly Agree	170	91	271
Agree	356	290	1016
Not Sure	64	15	91
Disagree	7	3	20
Strongly Disagree	3	1	2
Total	600	400	1400
Average (Mean)	1.87	1.83	1.90
Standard Deviation (σ)	0.68	0.54	0.61
Coefficient of Variation (C O V)	36.56%	29.51%	32.11%

Coefficient of Correlation (r): Between A and B - 0.99, Between B and C - 0.99, Between A and C-1.00, Source: Tables 1, 2 and 3.

Table-5
Table showing overall analysis of opinion given by teachers

Opinion	Response		
	X. Quality Consciousness (f)	Y. Deming’s System of Profound Knowledge (f)	Z. Deming Philosophy (f)
Strongly Agree	368	213	523
Agree	221	173	728
Not Sure	11	11	110
Disagree	0	0	37
Strongly Disagree	0	0	2
Total	600	400	1400
Average (Mean)	1.41	1.5	1.76
Standard Deviation (σ)	0.68	0.55	0.72
Coefficient of Variation (C O V)	34.88%	36.67%	40.91%

Coefficient of Correlation (r): i. Between X and Y - 0.99, ii. Between Y and Z - 0.99, iii. Between X and Z - 1.00. Source: Tables 1, 2 and 3.

Interpretation: The overall analysis of opinions of teachers shows that they are positively related against each other, with respect to the three facets analysed. It means that their attitude in general towards quality management and maintenance i.e., their overall quality consciousness directly affects their positioning in Deming's System of Profound Knowledge and this directly relates with their attitude on applicability of Deming Philosophy. If on any point they have a negative attitude or disinterest then it will be reflected in their attitude on other points as well which will adversely affect their career prospects. This has to be noted by the Educational Institutional authorities while taking decisions on policy changes. This analysis also reveals that, to the management expertise, even the teachers show a positive response by majority "Strongly Agreeing" to them. This fact highlights the increasing management perspective among new generation teachers and the fact that they have started realising the managerial role that they will have to undertake while progressing in their career. This strategic understanding itself indicates an optimistic approach of teachers who have realised about the tight competition that they have to face. The Coefficient of Variation element reveals that the variability in opinion can happen more in case of Applicability of Deming Philosophy, the variability can be positive or negative depending on how the rest of the population have grasped the idea of their managerial role while executing their teaching profession and also on their ability to grasp managerial expertise of Quality gurus.

This survey is basically about Dr W Edward Deming's expertise. Majority of the ideas were gathered after going through the blogs of The W Edward Deming Institute, "W. Edwards Deming offered 14 key principles for management to follow for significantly improving the effectiveness of a business or organization. Many of the principles are philosophical. Others are more programmatic. All are transformative in nature. The points were first presented in his book *Out of the Crisis*"- The W. Edward Deming Institute¹⁵.

Conclusion

It is a positive sign to notice that teachers have realised their managerial role. They are ready to apply the principles of Dr W Edward Deming in their methodology of teaching and executing their versatile role. The teachers have shown opinion similar to that of managers and even they have strongly agreed upon many points. Knowledge about Deming's System of Profound Knowledge and Deming Philosophy is very important in helping institutions as well as individuals for their managerial growth and success. This is applicable to all institutions including educational institutions. All the teachers, whether teaching at elementary, upper primary, high school or higher level of learning, will have to apply some kind of managerial expertise, at one time or another while executing their versatile role offered by the strategic environment. This survey throws light upon the fact that the Deming Principles which are very important for any concern, to survive competition and manage

overall quality, are applicable in educational institutions also, among teaching faculty. This factor once realised by the teaching community as well as by the Management of these institutions, then its execution becomes easy and its applicability will surely ensure success of these stakeholders (teachers and managers) in their career. Thus it can be rightly concluded that new generation teaching community appreciates applicability of the managerial expertise propounded by Dr. W. Edward Deming, in helping them to attain strategic career advancement, alike that of managers.

"Teachers are not just teachers anymore. They are the managers- Managers of the Human Resources of tomorrow- the Children".

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