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Education from a New Perspective

Sohayl Mohajer

There is no denying the fact that the current systems of education in our country are either examination oriented or certificate oriented. Most of our children and youth get this impression, from the day they begin their formal training, that what really matters is the mark they obtain in their exams. Whether they understand the subject or not is immaterial so long as they get the marks. This mindset is responsible for the current trend of having a large number of educated illiterates in our country. Our educated youth have all the certificates, but fail to understand the basic concepts of what they have studied.

Recently I was conducting a workshop for a group of science teachers. I asked them a simple question that children learn in physics in year six. The question was, “Describe the difference between heat and temperature?” While most of the teachers could define both heat and temperature separately, because they had committed the information to their memories, they could not explain the difference between the two. This is the plight of our current educational system! Even the best teachers, teaching in the renowned English-medium educational institutions, have no grasp of the basic concepts.

Having said this, let’s come to the theme of this paper. If we carefully study young children, we will soon realize that curiosity is an innate phenomenon present in every child. Young children are full of questions. They want to figure out everything for themselves – they ask questions, touch things, taste things and so forth. In the beginning, everything is learning. Even play is learning. They learn how to walk through trial and error, with all their muscles involved in this undertaking. They discover how to synchronize the complex movements of the muscles of their arms and legs and learn to co-ordinate the movements with great efforts and concentration. Once they acquire the basic skills of walking, the mind frees up their memory by passing on these skills to their unconscious minds. This frees their conscious minds for learning something new. As adults, we do not use our conscious minds when we walk. We have internalized the skill.

What is interesting about this process is that there are definite steps involved in every stage of it. The process begins by curiosity; then the child becomes interested in the activity and gradually begins to understand the steps involved. This understanding is reinforced by exercise and practice and finally it is internalized. With the help of these steps, learning moves from the conscious mind to the unconscious mind. Here we must realize that the
The internalization of learning is an important part of the knowledge itself. Furthermore, this makes us appreciate that real knowledge is not mugged up, but it is constructed through the efforts that we make.

The first problem that children encounter in our schools is that learning is no longer the outcome of their curiosity, but the rote learning of a series of subjects that they have to learn. Neither these children know why they are learning those subjects nor do their teachers know why they are teaching them! It is the case of the blind guiding the other blinds. In our classrooms doubt is no longer entertained and we present the bookish knowledge as undisputed facts to our students. The upshot is the complete disorientation of individuals – caused by blindly following instructions imposed on them by the system. Later on, individuals raised in such a system come to believe that the little that they know is enough for them – that they do not need to read any more books. They also become completely devoid of curiosity and doubt; believing that their culture is the best culture, their religion is the best religion and their country is the best country. Their language is the best language, their diet is the best diet and their state is the best state. This narrow-mindedness becomes the root cause of most of the social problems in the society.

What I am proposing now, is the creation of a new system of education based on the principle of independent investigation of truth – a system that encourages students to doubt everything and to become the seekers of truth. Critical thinking and curiosity would be very important tools employed in such a system to train students to become objective thinkers. Furthermore, such a system would empower students to take charge of their own lives and become the masters of their own destinies.

At the Foundation for the Advancement of Science, we are currently working on a new curriculum for primary education that is guided by the principle of independent investigation of truth. We are working on two distinct areas:

- For the cognitive and intellectual development of children, focus will be on the development of intelligence, imagination, thought, comprehension and memory. This segment of curriculum will mainly include the subjects of science, math and thinking skills, including critical and deductive thinking.
- For fostering the emotional and moral development of children, in addition to the areas mentioned above, the main focus will be on the development of emotions, intuition, attitudes, concepts and life skills. This will include the subjects of language, peace and social sciences.
Integration of these two categories will be at the level of concepts, skills, attitudes, and qualities. The notion of volition will also run through the entirety of the courses. Right from their earliest years, children will be taught to make moral decisions and to implement those decisions.

Due to the paucity of time and space, I end this short article here, but if another opportunity presents itself, this theme could be examined in greater details.
What is the Academic Life? 1. General Answers to Essential Questions

by Steve McCarty
Professor, Osaka Jogakuin College and University
President, World Association for Online Education

Series Introduction

What is, or should be, the academic life? After many years of thinking about academic ideals to live by, and occasionally writing about academic standards and ethics, the author aims to write a series on the essentials of the academic life. This journal was found to be progressive, welcoming a dialogue on articles of similar scope such as "Some thoughts on the idea of a University" (Sharma, 2012).

The plan of this series is to first set out some essential questions on timeless universals of the academic life, with brief, general answers in this article. Then further articles will aim for more detailed answers and discuss previous scholarship on the idea of the university. In the manner of a spiral, the approach of this series is to answer each question in the most general terms, and then in subsequent articles to discuss the specifics, interconnections, and implications of the issues raised.

Another whole series is envisaged on the academic life in a global age, a sort of report card on reconstituting Academia in cyberspace. It would draw from the author’s experience founding the World Association for Online Education. Nowadays educational technology is auxiliary to all disciplines, which is congenial to the author as a generalist. Since the advent

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of the Internet, new questions need to be raised, such as: How is scholarship adapting to this global age? How can the worldwide community of scholars contribute to a constructive form of globalization and take more of a leadership role in the world?

**Questions Definitive of the Academic Life**

What is, or should be, the academic life? It is hypothesized that the following questions are essential, and that fitting answers can point to the universals of the academic life. What is a university? What is a professor? Who are the colleagues of a person in higher education? What should be learned in graduate school regardless of the field of specialization? To what extent can a human being live by academic standards and ethics?

**General Answers to the Essential Questions**

The wording and combination of these questions can be suggestive of the universals involved in the academic life by distinguishing some definitive issues while eliminating what is not unique and essential to higher education. The selected questions to examine will first be answered briefly and generally to present an overview of the essence of the academic life. The author addressed some of the key issues earlier as follows:

The essence of the university is its universality, as represented by academic standards, ethics, and meaningful subject matter that transcends cultural boundaries … Liberal arts requirements for all the students unify the university, lest its purpose be narrowed to vocational training in separate departments … When atomic weapons and other scientific advances posed potential hazards to civilization, those with a well-rounded education pointed out the dire necessity for ethical responsibility, encouraging initiatives such as bioethics and disarmament. (McCarty, 1995, p. 43)

**What is a university?**

The essence of a university is its universality. All true universities have this quality in common. There can be a universal academic approach to any subject matter. Thus the curriculum can include pure and applied fields, theoretical and practical approaches, education and training, but not solely the latter elements. A true university does not yield to contemporary societal imperatives, otherwise education is sacrificed to vocationalization or whatever trend rules the day.

In one sense a university is a unity in itself, as cited above. General education or liberal arts subjects that round out higher education for all students provide a commonality within the university as well as an interface toward the world. The liberal arts are thus
essential to all specializations and provide a practical world-view as well, for example in foreign policy studies (Walt, 2012).

A university is situated in a certain community, era, and culture, but it shares the universality of the academic life in common with other universities in the world. All universities should be inviolable by forces that devalue or corrupt scholarship. An institutional culture where the university ends at the gates of its campus displays a grave misunderstanding of what a university is. True universities are fit for regional and international academic exchanges. Provided languages are translated, true universities have such commonalities that they are interpermeable and interconnected.

A university should be a sanctuary from the surrounding society with its corrupting influences of nationalism, violence, materialism, utilitarianism, exclusivism, and so forth. The university should provide sanctuary to well-reasoned critical thinking (cf. Hornedo, 2012) and proposed alternatives to the status quo of the society. Faculty members must be free from retaliation for provoking students to think or for publishing any conclusions reached conscientiously by objective analysis.

A university does not yield its objectivity to unquestioned assumptions or prejudgements of the truth. Newtonian physics governed everything that could be perceived in the 19th Century, but it had to give way to quantum physics and relativity theory when a greater scale was examined. The academic life was introduced by Socrates through Plato as the relentlessly examined life.

The idea of the university will be examined further in subsequent articles, considering the views of other scholars. The rest of the questions also aim to clarify the universal qualities of the university and academic life.

**What is a professor?**

This question is raised because a professor personifies the university. How to be professorial clarifies the academic life most succinctly. Thus the intent here is not to exclude scholars of a different rank or at an earlier stage of their careers, but rather to encourage scholars and especially teachers to be professorial. By living up to academic ideals, one is pointed toward the role of a professor, and suitable recognition may naturally follow.

To clarify what a professor is in the most direct way, it must be distinguished from surrounding professional roles such as being an instructor training specific skills, or being solely a classroom teacher. Although a professor is partly a teacher, classes are fewer because of the other roles a professor should play in Academia and society. Professors need to be
available to profess in areas where their expertise applies. For example, there is the blind review of papers, with little or no recognition for such work. A news program or a court may need the expertise and established credibility of a professor to arrive at an informative perspective or a sound judgement.

The academic process may be corrupted by the purchase of an academic position in some way, or by a careerist, publish-or-perish mentality of academic opportunism, which can be incited by credentialistic hiring practices and rigid rules such as point systems for promotion. Then what is more difficult, complex, interdisciplinary, or important is not researched, and publications in many fields are clogged with statistics that contribute little to knowledge or society because it is safer to stick to what can be quantified (McCarty, 2008, p. 3).

Of course there must be accountability, but in a context that assumes a love of learning and the priority of discovering things that truly advance academic fields. Often the bar is high for credentials in appointments but low for scholarly accomplishments after promotion.

Professors should have the time and tenure to rise above superficial concerns, to keep up with educational technology and advancements in their fields, to be active in academic societies, to give presentations at conferences, and to engage in all sorts of scholarly communication including but not confined to publications that ‘count.’

Who are the colleagues of a university person? –

They are the worldwide community of scholars connected to all true universities. Wherever the universality of the university manifests in shared academic standards and ethics, scholars belong to this worldwide community. Thus, beyond language barriers and cultural differences, they can readily communicate, collaborate or cooperate with other scholars sharing the academic way of life.

Because of the universality of the academic life, a regional or international academic project or association can be specialized, interdisciplinary, or pan-disciplinary when it involves expertise auxiliary to all fields such as educational technology. Thus the question of who is involved in the world community of scholars can provide another perspective on what is essential to the academic life.

While everyone on the staff of one’s institution may also be considered one’s colleagues, educators and researchers imbued with academic standards and ethics have more in common with scholars at other institutions and in other countries than with nearby
colleagues not engaged in scholarly activities. As can be seen at international conferences or in international academic organizations, scholars in the same fields have much in common and much to share with colleagues from different cultures but similar disciplines. Scholars from countries or religions that are currently in conflict can maintain collegial relations and cooperate in academic endeavors.

If scholars in some countries or regions cannot thus interact, either they are not true scholars or, more likely, their institution is impoverished, corrupted, or politically oppressed. Cut off from the lifeblood of academic exchanges in a global age, excellence would be unlikely, and such an institution might be a university in name only.

If professors are loaded with classes and campus duties that are not professorial, then scholarly activities and academic exchanges outside of the institution are in effect blocked. On the other hand, professors who hardly teach but are urged to bring in grants represent another distortion of the university by sacrificing its educational mission.

**What should be learned in graduate school regardless of the field of specialization? –**

It is the academic way of life, the standards and ethics of the world community of scholars, which should be internalized through intense graduate study and thesis committee supervision. There is a qualitative difference or leap from high school to university, and then again to graduate school. Just as higher education should not be an extension of high school, an advanced degree represents more than an extension of undergraduate studies. There can be exceptions where an individual internalizes the academic life before graduate school, or without it, because most learning is informal or through self-education. But a graduate degree from an accredited university means that such attainment is certified, and the individual is recognized as a peer in the academic community.

Because of the difficulty of surpassing the level of informational knowledge, often an academic person does not emerge without the cauldron of a thesis and the fires of vetting by professors. No amount of memorized information, formulae, citations, classes or conferences attended, or content produced in itself constitutes a qualitative leap into the academic life. But in the process of graduate school it is the mental discipline of standards and ethics that apply to all fields which may turn a person into a scholar.

Supervising professors can catch common errors of unscholarly thinking and suggest rigorous approaches to a certain investigation. The rigor itself is the discipline, and it should inculcate both rationality and ethical conduct. Common ways of thinking among lay people that scholars must overcome include overgeneralization from a few instances, certitude
despite incomplete information, seeing and valuing only what is within one’s purview, perceptual errors, logical fallacies, oversimplifying the complexity of interdependent causal factors, and so forth. Ethical errors include plagiarism, improper attribution, purchasing of papers or credentials, altering of inconvenient data or results, exploitation of others for academic advancement, and all other kinds of misrepresentation.

Thus, while difficult to specify, there are academic standards and ethics that are common to all disciplines and recognizable throughout the world community of scholars. It is academic rigor that is internalized through the discipline of a graduate education. What is to be acquired is not informational knowledge but rather expertise in an academic field.

To what extent can a human being live by academic standards and ethics?

In a holistic view of the human being, there are natural feelings such as love that motivate educators to share. Yet although there are phenomena seemingly beyond the grasp of scholarly methods, one could ask what affective or metaphysical domains exist where academic standards and ethics would prove unhelpful or contradicted.

It could take a lifetime to explore the great extent to which a scholar can live by academic standards and ethics. The scholar never wishes to stop learning, enquiring, experimenting, teaching, researching, publishing, mentoring, openly sharing and communicating. Academic methods are applicable to daily life, and academic ethics are applicable to moral conduct. The rigor of the academic life stays with the scholar after hours, an examined life of reason that applies to daily life in cognitive, and in some ways, affective domains.

When the idea of the university lives within a person, the academic life can provide plenty to live by personally as well as professionally, without contradiction. Such is the universality of the university.

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Articles


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Role of Emotional Intelligence in minimizing suicides among youth

Dr Shraddha Padmaja Awasthi

Every day we come across with various cases of suicides. The incidence of suicide in itself is a serious issue, but when it comes to young members of society, it becomes crucial. Young people are becoming more vulnerable to suicide attempts these days than it was before. The youngsters, who have umpteenth amount of energy, should participate in constructive & creative activities but they are trying to destruct their lives on their own. Youth suicide is a particularly complex and sensitive issue, and its effects are devastating for entire communities, especially the family and friends of the victims.

Suicide is the most rapidly growing cause of death among youth between the ages of fifteen and twenty-four. In the mid-1990s, the National Center for Health Statistics ranked suicide as the third-leading cause of adolescent death. In addition, the number of recorded deaths by suicide is apparently an underestimate of reality since a large number of completed suicides go unreported or are considered as accidents.

Suicide: Suicide (Latin suicidium, from sui caedere, "to kill oneself") is the term used for the deliberate self-destruction of a human being, by causing their body to cease life function. Such actions are typically characterised as being made out of despair, or attributed to some underlying mental disorder which includes depression, bipolar disorder, schizophrenia, alcoholism and drug abuse. There are other problems such as financial crisis, interpersonal relationships, stress, financial crisis, interpersonal relationships and other undesirable situations play a significant role.

Suicide Ideation: Suicidal ideation means wanting to take one's own life or thinking about suicide without actually making plans to commit suicide. It is a medical term used when an individual has contemplated suicide but has made no present plans of actually committing suicide. People, who have problems of anxiety disorder or depression, are more prone to suicide ideation. Suicidal ideation does not necessarily lead to actual suicidal intentions, but it should be taken seriously.

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Over one million people commit suicide every year, making it the tenth-leading cause of death worldwide. It is a leading cause of death among teenagers and adults under 35. There are an estimated 10 to 20 million non-fatal attempted suicides every year worldwide.

- Every year, almost one million people die from suicide; a "global" mortality rate of 16 per 100,000, or one death every 40 seconds.
- In the last 45 years suicide rates have increased by 60% worldwide. Suicide is among the three leading causes of death among those aged 15-44 years in some countries, and the second leading cause of death in the 10-24 years age group; these figures do not include suicide attempts which are up to 20 times more frequent than completed suicide.
- Suicide worldwide is estimated to represent 1.8% of the total global burden of disease in 1998, and 2.4% in countries with market and former socialist economies in 2020.
- Although traditionally suicide rates have been highest among the male elderly, rates among young people have been increasing to such an extent that they are now the group at highest risk in a third of countries, in both developed and developing countries.

A research has been done on Suicide among children and adolescents in south Delhi (1991–2000) with the objective to study the incidence and trends of suicide among children and adolescents of South Delhi. A retrospective analysis was carried out on 222 cases of suicidal deaths pertaining to age group of 10–18 years, the postmortem examination on the body of which were conducted in Department of Forensic Medicine and Toxicology, All India Institute of Medical Sciences, New Delhi during the period from 11st January 1991 to 311st December 2000. The particular of cases were analyzed according to age group, sex, method used and causes of committing suicide. It was found that out of 222 cases 123(55.4%) were of girls (Female: Male 1.24:1). Commonest age group involved was 15–18 years in both the sexes. Commonest method used for committing suicide was hanging (57% in girls, 49.5% in boys) followed by poisoning (37.4% in girls, 49.5% in boys). Methods used to commit suicide are widely available and are difficult to restrict. Therefore, suicide prevention strategy based on risk factors could be more effective rather than limiting the access to methods.

There are other facts which are related to suicides. It is found that suicide is the tenth leading cause of death worldwide with about a million people dying by suicide annually. According to 2005 data, suicides in the U.S. outnumber homicides by nearly 2 to 1 and ranks as the 11th leading cause of death in the country, ahead of liver disease and Parkinson’s. Worldwide suicide rates have increased by 60% in the past 50 years, mainly in the developing countries. Most suicides in the world occur in Asia, which is estimated to account
for up to 60% of all suicides. According to the World Health Organization, China, India and Japan may account for 40% of all world suicides. In the U.S., for example, the rate of suicide is increasing for the first time in a decade.

**Causes of suicides:**

There are various causes which make one prone to suicide. These factors may be physical, mental, social, emotional or economical.

Suicide cases are related to all age groups but these days young members of the society are at higher risk. Youth have a tendency to perceive even the trivial problems as serious issues and they find themselves unable to think about the life beyond their problems, hence they believe that by killing their lives they will be able to kill the problems forever. At times they don’t find someone with whom they can share their problems and find suitable solutions.

People who commit suicide think that by ending their lives they will be able to find a permanent solution to their problems. Negative emotions such as grief, guilt, shame, anger, fear, sadness etc serve as supporters to self-destructing behaviour. There may be various sources from which these emotions arise. The pain of psychological problems becomes so strong that people find solace in hurting themselves. Frustrated psychological needs, intolerable psychological pain, hopelessness, helplessness, escapism, destructive tendencies, lack of communication, unfulfilled dreams and undesired relationships are the major factors of suicide cases especially among youth.

There may be multiple reasons behind committing suicides.

• Family-related problems

  Family problems related to divorce or separation of parents, insufficient time given by parents, quarrel between parents, change in number of family members, sibling rivalry, impartial behaviour of parents, death of any family member etc may be responsible for suicide ideation and hence suicide.

• School-related Problems

  Change in school, lack of good friends, impartial attitude of teachers, bullying, sexual abuses, improper environment of school, burden of studies, poor performance in exams etc may be considered as causes of suicides.

• Social problems
Shift to new society, lack of peers, prejudiced attitudes of society members, poor social status etc are aide to the suicide cases. When young people find it difficult to cope with various social problems, they tend to commit suicide.

• Emotional problems

Emotional problems such as loneliness, unfriendly attitude of others, humiliating behaviour of others, separation from closed ones, break-ups, undesired marriages, opposition from parents for marriage plans, frustration, feeling of depression, various types of complexes etc are the causes of suicides.

• Career-related problems

Confusion over choosing a career, dissatisfaction, unfriendly attitude of colleagues, unhealthy competition, compromises for a particular job, high ambitions etc are the career related problem which may lead to suicide if not catered in time.

• Physical problems

There are persons who are physically unfit or unwell may tend to have feeling of despair, frustration, depression, anger etc. These types of physically ill people try to resolve their inability related problem by committing suicide.

• Economical problems

Financial crisis, high status lifestyle, repayment of loans, burden of big family, medical expenses, marriage expenses etc are the major causes of suicide cases.

The above mentioned causes are the major causes of suicide cases, there may be other causes also as human emotions are difficult to comprehend.

Symptoms of suicide ideation

By knowing the major causes of suicide cases we may work upon symptoms of the persons planning about committing suicide. Parents, friends and other near ones should be aware of warning signs. If they see the signs, they should talk to the child about their concerns, and seek professional help.

The symptoms may be change in eating and sleeping habits, disinterest in regular activities, unfriendly attitude, violent or rebellious behavior, drug or alcohol addiction, lack of personal care, difficulty in concentrating on work, frequent complaints about emotion-related physical problems, lack of interest in recreational activities etc.

The symptoms may be more, but the important thing is that closed ones should be extra cautious towards these signs and whenever they find anything unusual they should start discussing with the person concerned.
Edwin Shneidman, a clinical psychologist who is a leading authority on suicide, described ten characteristics that are commonly associated with completed suicide. Schneidman's list includes features that occur most frequently and may help us understand many cases of suicide.

It becomes obvious that suicide is not only a medical disorder but a psychosocial issue. It is more than just a manifestation of emotional distress. It is a complication of an unresolved state of affairs.

**Emotional Intelligence (EI)**

EI involves the ability to accurately perceive, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions. These abilities underlie a number of contemporary workplace variables that are not typically accounted for by IQ and personality.

According to Byron Stock, ‘Emotional intelligence is not about being soft, it is…having the skill to use your emotions to help you make choices in the moment and have more effective control over yourself and your impact on others.’

“Emotional intelligence is the ability of an individual to appropriately and successfully respond to a vast variety of emotional inputs being elicited from inner self and immediate environment. Emotional intelligence constitutes three psychological dimensions such as emotional competency, emotional maturity and emotional sensitivity, which motivate an individual to recognize truthfully, interpret honestly and handle tactfully the dynamics of human behaviour”. (Dalip Singh 2003)

Emotional intelligence can make a huge difference to well-being and stress. There have been many well-documented studies conducted on the effectiveness of emotional intelligence which show that emotional intelligence has positive impact on behavior, attitude as well as on reducing stress.

**Relationship between EI & Mental health**

In a study conducted with the obstetrics department of a major urban hospital in Bologna, Italy, the healthcare professionals high in emotional intelligence scored far better in an assessment of job performance and life success. The highest performers scored an average of over 30% better on the “Six Seconds Emotional Intelligence Assessment”, a powerful measure of essential competencies for being smart with feelings.
Study coauthor Lorenzo Fariselli, manager of research for Six Seconds Italy, explained the importance of the finding: “Stress is increasingly challenging for organizations and professionals worldwide, but it’s been unclear how to most effectively manage this problem. Emotional intelligence appears to underpin these factors. Higher levels of emotional intelligence are related to: Better academic performance (Lam & Kirby, 2002) & Better social support and satisfaction with social support (Ciarrochi et al, 2001).

On the other hand Lower levels of emotional intelligence are related to:
•Unauthorized school absences (Petrides, 2004)

Emotional intelligence moderates the relationship between stress and mental health

According to Joseph Ciarrochi, Frank P. Deane and Stephen Anderson (in their research) EI makes a unique contribution to understanding the relationship between stress and three important mental health variables, depression, hopelessness, and suicidal ideation. University students (n=302) participated in a cross-sectional study that involved measuring life stress, objective and self-reported emotional intelligence, and mental health. Regression analyses revealed that stress was associated with: (1) greater reported depression, hopelessness, and suicidal ideation among people high in emotional perception (EP) compared to others; and (2) greater suicidal ideation among those low in managing others’ emotions (MOE). Both EP and MOE were shown to be statistically different from other relevant measures, suggesting that EI is a distinctive construct as well as being important in understanding the link between stress and mental health.

Since suicides are directly related to mental health so they are also related to emotional intelligence.

The authors of a research work studied whether the presence of emotional intelligence is protective against suicidal behaviors in youth with a history of childhood sexual abuse. The findings provide preliminary evidence that emotional intelligence is in fact a protective factor for suicidal ideation and attempts. In addition to the clear relevance of the research for suicide prevention, there are additional implications relevant to mental health and public health that are explored.

Preventing suicide with Emotional Intelligence

A study was conducted on the topic ‘Emotional Intelligence Is a Protective Factor for Suicidal Behavior’ by Christine B. and Matthew K.
The objective of the study was to find out whether emotional intelligence (EI) decreases the likelihood of suicidal ideation and attempts among those at risk. Adolescents (N = 54) aged 12 to 19 years were recruited from local psychiatric clinics and the community to participate in this cross-sectional laboratory-based study. Analyses examined whether the relations between childhood sexual abuse and suicidal ideation and attempts were moderated by adolescents’ EI. These constructs were assessed using self-report, structured interviews, and performance-based tests, respectively. Analyses of the data revealed that EI is a protective factor for both suicidal ideation and attempts. Specifically, childhood sexual abuse was strongly predictive of these outcomes among those with low EI, weakly predictive among those with medium EI, and completely unrelated among those with high EI.

Follow-up analyses revealed that the protective effect of EI was driven primarily by differences in strategic EI (i.e., ability to understand and manage emotions) but not experiential EI (i.e., ability to perceive emotions and integrate emotions into thoughts). Conclusions of the study provide preliminary evidence that EI is a protective factor for suicidal ideation and attempts. Important next steps include testing the moderating influence of EI on a wider range of stressful life events and self-injurious behaviors, as well as conducting experimental studies to determine whether enhancing EI decreases the subsequent occurrence of these behavior problems.

As it is clear from the above discussion that suicide is nothing but a misinterpretation and mismanagement of emotions so it can be said that by knowing and understanding one’s own emotions one can try to resolve various psychological issues and thus by doing so one can not only avoid suicide but can also lead a satisfying life.

**Conclusion**

Emotional intelligence is the potential to be aware of and use one’s own emotions in communication with oneself and others and to manage and motivate oneself and others through understanding emotions. The critical situation arises when we fail to first of all understand our emotions and even if we do so we fail to manage them and then comes the situation of crisis. In this situation of crisis if a person is not emotionally intelligent then he will certainly become a victim of self destruction.

Emotional intelligence influences our day-to-day problem solving behavior in home, in school, in society, in our work areas, and in any critical situation. Emotional intelligence helps us in the situation of crisis or confusion. It supports us in following our intuitions and
taking decisions. Moreover by managing our emotions we can make our lives healthy, happy and satisfied.

Our emotions evolved as a tool for survival, and today emotions have a privileged position in the brain. When we are upset the emotional centers can hijack the thinking centers, rendering us unable to think clearly, focus on the task at hand, perceive in an undistorted manner, and even make it harder to remember what’s relevant to what we’re doing (instead we remember easily anything about what’s upsetting us). So whether in the workplace or the classroom, managing our emotions is the prerequisite to learning and focus. (Daniel Goleman)

When we relate suicide with emotional intelligence, we are automatically telling the preventive measures of suicides, because suicides are nothing but rollercoaster ride of emotions, if one can survive in the high stress zone then one is free to live and if one cannot then it becomes difficult to survive. Emotional intelligence becomes instrumental in handling the high stress situations.

Suicide prevention is as much a science as it is an art. Although applying scientific psychotherapeutic techniques can be effective, the gentle art of dealing with the suicidal person makes all the difference. The person who is dealing with person having suicidal tendency should be emotionally intelligent, otherwise s/he may become a victim of empathy and hence would find it difficult to cope with the situation.

It is difficult to control all suicide cases but they can be minimized by providing training of emotional intelligence to the young children. As education plays an important role in an individual’s growing period so the training of emotional intelligence should be started in schools itself from a very young age. The entire school organization should be trained enough to deal with the problems of young children. School can also organize workshop for the parents or caretakers of the children so that they can also deal with the upcoming problems of children.

Since young members of the society are the future of the society so it becomes the responsibility of the society to save their lives by minimizing the suicides.

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Academic-Qualification-wise Professional Adjustment of Teachers: A Comparative Study

Dr. Afroz Haider³

ABSTRACT

Investigator carried out a study of professional adjustment of teachers having different academic qualification. 792 sample of teachers teaching in primary school to higher education institutions have been taken in this study. Teachers have been classified into five categories as per their academic qualification viz.- Untrained Graduates and Undergraduates, Trained Graduates and Undergraduates, Untrained Post Graduates, Trained Post Graduates, Trained and Untrained Research degree holders. To evaluate the status of professional adjustment of teachers, a tool viz. "Manual on Teachers Professional Adjustments" was used which was prepared and standardized by the investigator. The reliability and validity of tool were found 0.89 and 0.66 respectively. On the basis of percentile rank and professional adjustment scores, professional adjustment status of teachers have been classified into three levels viz. well-adjusted, average-adjusted low-adjusted. Analysis of data was done by ANOVA and \( \chi^2 \) test through SPSS version 13.0 and Prism 3.0. This study reveals that academic quantification is an important factor for enhancing professional adjustment of teachers.

Academic-Qualification-wise Professional Adjustment of Teachers: A comparative study

Professional adjustment means being adjusted to his profession. The person must have in depth liking, awareness of pros and cons of his profession. Liking not only by its exterior appearance but also by work culture, duty hours, hardship and nature of working is vital. For example, a person is very much interested in teaching profession observing the prestige and comfortable life of teachers. No sooner does he join, than he starts feeling uncomfortable because his presentation is not good enough, and he is unable to teach especially academically weak students. Though he has sound knowledge in his subject area, he is devoted to his profession yet he may dislike it. For example a person is very much interested

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in army viewing the dress and discipline. No sooner does he join the army than he is terminated from services because he is unable to cope up the hardship of army.

The essence is, a person may be adjusted in one profession but might not be in other one. If he is adjusted in teaching profession may not be in administration, marketing or army etc. and vice-versa, because every profession has its own requirements. If a person has those requisite merits only then he may be adjusted in such a profession otherwise he/she may be mal-adjusted.

A professionally adjusted person does not want to switch over to any other profession, but may be happier in another capacity of same nature. For example a teacher may switch over from primary to secondary or degree level and vice-versa but not from teaching profession to engineering, marketing or administration etc.

Job satisfaction and professional commitment are essential factors for professional adjustment but not a sufficient condition for its existence.

PREVIOUS STUDIES:

- Jensen (1963) examined teacher’s professional responsibilities: An interpersonal perception study.
- Venkataramappa (1971) carried out a sociological study of primary school teachers in Mysore city.
- Naidu (1974) studied career orientation and professional preparation among the women teacher trainees of the colleges of education in Madhya Pradesh.
- Chandra (1976) studied of emotive aspects of work (A perception of college teachers).
- Srivastava (1979) studied of sense of responsibility among secondary school teachers.
- Sharma (1983) made a comprehensive study of types of Teaching Personality at work in the Secondary Institutions of Lucknow city.
- Charumanee (1986) perceived professional development needs of NEBRASKA public two Year College full time and part time vocational instructors.
Adams (1997) examined professional development planning; supporting the professional growth of teacher through inquiry.

Many studies discovered the lower qualification groups to be more interested in teaching. Studies by NCERT (1971) and Srivastava (1974) found this very trend. Bhandarkar (1980) and Donga (1987) through their studies deny the existence of any definite relationship between qualification and preference for teaching profession. Studies by Chandra (1976) and Charumanee (1986) try to relate the academic aspect to other more important factors and determinants.

OBJECTIVE:
- To investigate and compare professional adjustment status of more and less qualified teachers.

HYPOTHESIS:
- There will be no significant difference between means of professional adjustment status of more and less qualified teachers.

METHODOLOGY

Population-
This study was confined to the teachers of private (recognized and non-recognized) and government aided primary to junior, secondary to higher secondary schools and higher and technical education teachers of Lucknow, Jaunpur, Allahabad & Sitapur constitute the population of the study.

Sample-
The sample of the present study consists of 792 teachers. The number of primary state teachers (preparatory to class VIII) is 420, secondary stage teachers (IX to XII) is 272, and higher stage (degree, PG and technical) teachers 100. These teachers are employed in 86 institutions of Lucknow, Allahabad, Jaunpur and Sitapur districts.

TOOL-
Teachers Professional Adjustment Scale (TPAS) was constructed and standardized by the investigator. This scale has 100 items this test was standardized on a sample of 792 teachers from pre-primary to higher education teachers.

The compact version of the scale has three distinct points:-
1- Personal data sheet.
2- Scale having 100 (47 positives and 53 negative) items.
3- Space for calculation.
This scale has three alternative choices of responses seemed a better arrangement.

**Identification of Dimensions:**

Study of literature on professional adjustment and discussion with teachers resulted in the identification of the following aspects of professional adjustment:

- Personal factors
- Social factors
- Economic factors
- Academic factors
- Cultural factors and school activities
- Work culture and school atmosphere
- Awareness
- Personal morality

**Pilot study:**

The try out form consisted of 192 items. This scale was administered on a sample of 100 teachers randomly selected from private and government aided institutions.

**Final study:**

For the final scale 100 items (47 positive and 53 negative) were found to get hundred percent agreement among the 9 experts in the field of psychology, education and management regarding the relevance of the item content and to the attitudes being measured by the scale.

The tool was administered on the same 100 teachers after a period of 30 days. The investigator found out Pearson's product moment correlation of two tests, it was found to be 0.77.

**Validity:**

The validity of this scale was calculated by external parameter. A rating scale for rating teachers on professional adjustment was prepared. Following three major dimensions were taken into rating scale:

1. Interest in class teaching
2. Teaching competency
3. Healthy interrelationship with students, college authorities, colleagues, staff members and guardians.
Correlation coefficient between score obtained by the teachers on expert rating and through Teachers Professional Adjustment Scale (TPAS) was calculated, it was found to be 0.66.

Reliability:

The reliability of the tests was calculated by split half method. The correlation between scores of correct answers on all odd numbered items and even number items was calculated, it was found to be 0.799 and corrected by Spearman Brown prophecy formula, it was found to be 0.89.

Norms:

In this study, Professional Adjustment status of teachers were classified into following three broad and distinct levels on the basis of percentile ranks and their equivalent scores obtained by them.

**TABLE -1**
Score and percentile rank for three different levels of Professional adjustment

<table>
<thead>
<tr>
<th>Score</th>
<th>Levels of Adjustment</th>
<th>Percentile Rank</th>
<th>No. of observed cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 and above</td>
<td>Well-adjusted</td>
<td>85 and above</td>
<td>122</td>
</tr>
<tr>
<td>31-63</td>
<td>Average-adjusted</td>
<td>16-84</td>
<td>548</td>
</tr>
<tr>
<td>30 and below</td>
<td>Low-adjusted</td>
<td>15 and below</td>
<td>122</td>
</tr>
</tbody>
</table>

Statistical Analysis:

Teachers professionals adjustment scores (TPA scores) of three groups were compared by one way analysis of variance (ANOVA) followed by Tukeys' test. The proportions between groups were compared by chi square ($\chi^2$) test. A two-tailed ($\alpha=2$) P<0.05 was considered statistically significant. Analyses were performed on GraphPad Prsim 5.0.

Data analysis and interpretation:

In this study, significance level of mean difference between following categories of teachers have been tested.

<table>
<thead>
<tr>
<th>Academic Qualification wise category of teachers</th>
<th>Group</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Untrained Graduates and Undergraduates</td>
<td>A</td>
<td>150</td>
</tr>
</tbody>
</table>
2. Trained Graduates and Undergraduates   B   120
3. Untrained Post Graduates             C   195
4. Trained Post Graduates               D   273
5. Trained and Untrained Research degree holders E   54

**TABLE-2**

Assessment Summary \( \bar{X} \pm SD_N \) of teachers professional Adjustment scores of five groups

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>Mean ± SD</th>
<th>ANOVA</th>
<th>p- value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F value</td>
<td>(DF=4.788)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>150</td>
<td>45.52 ± 16.65</td>
<td>5.200</td>
<td>0.0004</td>
</tr>
<tr>
<td>B</td>
<td>120</td>
<td>41.98 ± 18.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>195</td>
<td>47.38 ± 17.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>273</td>
<td>49.47 ± 18.03**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>54</td>
<td>52.63 ± 20.74**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p <0.01 – as compared to group B.**
Table 3

Tukey's Test

<table>
<thead>
<tr>
<th>Tukey's Multiple Comparison Test</th>
<th>Mean Diff.</th>
<th>q</th>
<th>p-value</th>
<th>95% CI of diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>A vs B</td>
<td>3.54</td>
<td>2.279</td>
<td>0.05</td>
<td>-2.523 to 9.603</td>
</tr>
<tr>
<td>A vs C</td>
<td>-1.86</td>
<td>1.356</td>
<td>0.05</td>
<td>-7.213 to 3.493</td>
</tr>
<tr>
<td>A vs D</td>
<td>-3.95</td>
<td>3.064</td>
<td>0.05</td>
<td>-8.981 to 1.081</td>
</tr>
<tr>
<td>A vs E</td>
<td>-7.11</td>
<td>3.532</td>
<td>&gt; 0.05</td>
<td>-10.74 to 0.646</td>
</tr>
<tr>
<td>B vs C</td>
<td>-5.4</td>
<td>3.684</td>
<td>0.05</td>
<td>-8.311 to 0.327</td>
</tr>
<tr>
<td>B vs D</td>
<td>-7.49</td>
<td>5.392</td>
<td>0.01</td>
<td>-12.91 to -2.068</td>
</tr>
<tr>
<td>B vs E</td>
<td>-10.65</td>
<td>5.124</td>
<td>0.01</td>
<td>-18.76 to 2.538</td>
</tr>
<tr>
<td>C vs D</td>
<td>-2.09</td>
<td>1.768</td>
<td>0.05</td>
<td>-6.704 to 2.524</td>
</tr>
<tr>
<td>C vs E</td>
<td>-5.25</td>
<td>2.698</td>
<td>0.05</td>
<td>-12.85 to 2.346</td>
</tr>
<tr>
<td>D vs E</td>
<td>-3.16</td>
<td>1.673</td>
<td>0.05</td>
<td>-10.53 to 4.213</td>
</tr>
</tbody>
</table>

Table 2 (F=5.200, p=0.0004) shows that there is significant difference between mean values of A,B,C,D and E groups. So tukey's test applied to check significant difference between any two groups.

Table 3 reveals that group D and E are significantly higher as compared to B at 0.01 level, while status of other groups are found similar.

As observed in comparing the professional adjustment status of trained and untrained teacher groups as a whole, here the exercise is partly repeated for the varying qualification.
groups. The first pair being those of undergraduates, trained vs. untrained. Their professional adjustment is found to be statistically not significant. This is quite in line with the finding of that earlier section and needs no further comment beyond what was given there.

This comparison of Professional Adjustment status of trained graduate and undergraduate vs. the untrained post graduate groups of teachers shows significant difference in favour of the untrained group. It might seem to be disconcerting at the first look, but on deeper probe it sustains scrutiny and seems to be justified.

When only the postgraduate qualification groups – trained vs. untrained are compared for their relative position in professional adjustment, the differences are found to be not significant statistically. This indicates that possibly the training qualification does not enhance the professional adjustment position of postgraduate group as a whole. There might of course be some individual cases violating this general trend, but it holds valid for the group as a whole.

The professional adjustment status of teachers holding research degree without training diploma vs. postgraduate group with training diploma shows no significant difference on statistical test. That shows that higher academic achievement does not necessarily lead to better professional adjustment among teachers. Academics beyond the prescribed level remain only in effecting ornamental attainment, unconcerned with their professional adjustment status enhancement.

The result of this comparative analysis of professional adjustment status of untrained undergraduates plus untrained graduates vs. untrained postgraduates groups is almost similar to other pairs in being non significant. Their remaining untrained has nothing notable to contribute by way of their professional adjustment whether they are graduates, undergraduates or postgraduates academically considered.

TABLE 4

Professional Adjustment status/level of

Teachers having different academic qualification

<table>
<thead>
<tr>
<th>Academic qualification wise group of</th>
<th>Level of Professional adjustment</th>
<th>χ² value (DF = 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Well-adjusted</td>
<td>Average-adjusted</td>
</tr>
</tbody>
</table>

Table 4 reveals that $\chi^2$ value ($\chi^2 = 25.9$, $p = 0.001$) for differences between proportions (percentage) among five groups of teachers of significant statistically at 0.01 level which denotes that professional adjustment level (well, average and low) of each group differs significantly.

Trained and untrained research degree holders (37.04%) are ahead of others in well adjusted count, while trained graduates and under graduates to be lowest (15%).

The picture of the mediocre range professional adjustment point is rather mixed up. Highest percentage (72.86%) goes to untrained postgraduates, while lowest proportion (51.85%) emerges for trained and untrained research degree holders.

In low adjusted level, highest percentage (13.33%) is of trained graduates and undergraduates while lowest proportion (5.86%) is recorded for trained postgraduates.

**CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS**
As observed in comparing the professional adjustment status of trained and untrained teacher groups as a whole, here the exercise is partly repeated for the varying qualification groups. The first pair being those of undergraduates, trained vs. untrained. Their professional adjustment is found to be statistically not significant. This is quite in line with the finding of that earlier section and needs no further comment beyond what was given there.

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The result of this comparative analysis of professional adjustment status of untrained undergraduates plus untrained graduates vs. untrained postgraduates groups is almost similar to other pairs in being non significant. Their remaining untrained has nothing notable to contribute by way of their professional adjustment whether they be graduates, undergraduates or postgraduates academically considered.

Their being trained postgraduates leads them to a superior professional adjustment level than their untrained graduate and undergraduate colleagues. Their being a step higher academically plus their training advantage creates this superior position of professional adjustment level. It seems to be quite reasonable and in accordance with normal expectations for their relative points of advantage both academically and technically, than their fortunate colleagues.
This deeper analysis concerning professional adjustment levels of untrained graduates and undergraduates vs. trained research degree groups throws in bold relief some of the possible directions responsible for generating greater professional adjustment among the teacher community under the existing formal schooling setup in the typical Indian scenario. Once again, the trained postgraduate group of teachers are able to display their better professional adjustment, than their graduate and undergraduate colleagues with training qualification. It seems advanced academic achievement is able to generate greater sense of professional adjustment when combined with appropriate technical training, than the lower academic achievement level could the critical dividing line being the post graduation examination. The two elements viz. academic and technical qualification require a certain quantum, to culminate in producing the salutary quality of professional adjustment in a sufficient amount to remain stable under trying conditions of material and human nature.

The group with advanced academic qualification research degree holders etc. is able to register its higher status of professional adjustment. The lower qualification group i.e. graduates and undergraduates are definitely lower in the overall professional adjustment in comparison to this higher qualification group. What exactly could be the final precipitating factor in keeping the compared groups so distinctly apart cannot be easily guessed. It will require further systematic research studies to identity the underlying elements generating such stable difference.

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Importance of Value Education in Modern time

Beena Indrani

Everyone knows that life is precious – that life is important. We all protect our life because we care for it more than anything else. If life is so important, the values of life are even more important. Values are guiding principles, or standards of behaviour which are regarded desirable, important and held in high esteem by a particular society in which a person lives. "The Importance of Values and Morals are the code we live by in a civil and just society. They are what we use to guide our interactions with others, with our friends and family, in our businesses and professional behaviour. Our values and morals are a reflection of our spirituality; our character. They are what we hope to model for our children and the children around us, because children do watch us as they develop their own sense of right and wrong. Value education means inculcating in the children sense humanism, a deep concern for the well-being of others and the nation. This can be accomplished only when we instill in the children a deep feeling of commitment to values that would build this country and bring back to the people pride in work that brings order, security and assured progress. A person with proper values will not be afraid to face problems. He or she will expect and accept them as part of life. He or she will not give unnecessary importance to anything that happens in life. He or she will have complete faith in God. Such a person will be an example to the rest. Last but not least we must love our own values in life, to build a strong character. It will help us to lead our life as it should be lead. It is very necessary for the fulfillment of life’s purpose. In today’s scenario our values have been discarded by the new generation in the upcoming of the new fashion. In such a situation it is very important for someone to lay down basic principles for us so that we may lead a brightened life, no matter the stepping stones of success hit us hard we on the basis of these principles can guide our life. Thus value education completes this need very easily with an impact on the young minds making the world a better place to live in.

Value shapes our relationships, our behaviours, our choices, and our sense of who we are. The more positive our values, the most positive our actions. This is one of the reasons why value education is being taught or included in all type of education, because it plays a great role for student’s becoming successful in their own choice of careers.

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Values in education are like what virtues make of a human being. Value education harmonizes the need for the student to achieve in a competitive world and the need to be compassion to his fellow beings. While society today faces many pressures and pulls of modern day advancement education with its competitive marking system is creating a market oriented society. Children are being groomed to be professionals to capture the top salary jobs in the market. All the same while it is necessary to teach the child to fish instead of giving him a fish it is values that make a man.

The definition of value education is educating the child to harmonize every aspect of his being viz. spiritual, physical, emotional, intellectual and psychological so as to develop his personality in a holistic manner.

**Meaning of value-based education:**

Education is the vehicle of knowledge, self-preservation and success. Education not only gives a platform to succeed, but also the knowledge of social conduct, strength, character and self-respect. The greatest gift education gives us is the knowledge of unconditional love and a set of values. These values include the simple difference between right and wrong, a belief in God, the importance of hard work and self-respect. Education is a continuous learning experience, learning from people, learning from leaders and followers and then growing up to be the person we are meant to be. Value-based education is a threefold development of any individual of any gender and age, but most importantly of a child. Education tries to develop three aspects: physique, mentality and character. Even though physique and mentality are important, they are menaces without the third because character is the greatest of these. Education plays a huge role in precisely this area. Value-based education is a tool which not only provides us a profession which we can pursue but also a purpose in life. The purpose of our life is undoubtedly to know oneself and be ourselves. We cannot do it unless we learn to identify ourselves with all that lives. The objective of education in a country like India, which has a glorious heritage and can boast of diversity in geography, culture, values and beliefs very rarely seen in this wide world, should be to educate a student of the value system which is indispensable to live successful life (Das, Sayan, 2008).

**Role of value education in contemporary society:**

Every Country develops its own system of education to express and promote its unique Socio-Cultural identity and also to meet the challenges of the times. Although the country has made rapid progress in various areas like scientific technology, economic
infrastructure etc. but its value system has been declined. Therefore, Education in general and value education in particular occupies a prestigious place in modern context of contemporary society. The problem of value education of the young has assumed increasing prominence in educational discussion during recent times. Parents, teachers and society at large are concerned about values and value education of children. We are witnessing tremendous value crisis throughout the world today. A lackadaisical attitude towards value and its institutions is pervasive in the world today. The reappearance of barbaric qualities of selfishness, clashes and conflagration give clear indication of the process of degeneration of human society. There is an urgent need for a great effort to revive and reform the values of human life and to rejuvenate the foundation of civilization.

Values are goals set for achievements and they motivate, define and color all our activities cognitive, affective and conative. They are described as the socially defined desires and goals that are internalized through the process of conditioning, learning & socialization. The present education needs moral, spiritual and aesthetic values also to be included in it. The culture and traditions can be preserved & transferred to the next generation by the help of value education only. Value education is much concerned with striving for personal wholeness as well as generating a responsible attitude towards others and an understanding of wrong and right behavior. The most constructive factor in value education is its purpose which encourages the child to explore the powers while offering living guidance and setting appropriate limits to behavior. Value education helps in building and strengthening of positive sentiments for people and ideals. It should prepare individuals for active participation in social life and acceptance of social rules. Value education has to be included in various aspects of education. Attention needs to be pay by higher authorities to spread the importance of value education in society.

**Importance of value education:**

Education is a methodical effort toward learning basic facts about humanity. And the core idea behind value education is to cultivate essential values in the students so that the civilization that teaches us to manage complexities can be sustained and further developed. It begins at home and it is continued in schools. Everyone accepts certain things in his/her life through various mediums like society or government. Value education is important to help everyone in improving the value system that he/she holds and put them to use. Once, everyone has understood their values in life they can examine and control the various choices they make in their life. One has to frequently uphold
the various types of values in his life such as cultural values, universal values, personal values and social values.

Thus, value education is always essential to shape one's life and to give him an opportunity of performing himself on the global stage. The need for value education among the parents, children, teachers etc., is constantly increasing as we continue to witness increasing violent activities, behavioral disorder, lack of unity in the society etc.

The family system in India has a long tradition of imparting value education. But with the progress of modernity and fast changing role of the parents it has not been very easy for the parents to impart relevant values in their wards. Therefore many institutes today conduct various value education programs that are addressed to rising problems of the modern society. These programs concentrate on the development of the children, young adults etc. focusing on areas like happiness, humility, cooperation, honesty, simplicity, love, unity, peace etc.

**Importance of value education in schools:**

The importance of value education in schools is highlighted by many a principal. Why is value education important in schools? Often the teacher explains the meaning of value education to children. Value education begins at home and is developed in schools. Stories with quotes on value education are important to help children understand the topics of value education. Many value education videos are also available for value education for kids, students and for children for all ages. At time value education is offered in schools. Moreover value education and character building go hand in hand just the same as national integration does. Don Boscos’s School, Jesus and Mary’s Convent, St. Xavier’s School and St. Michael’s in India are fore runners in the field of value education in schools today.

**Importance of value education in India:**

Value Education in India from the ancient times has held a prime place of importance. From the gurukul stage the child not only learnt skills of reading and archery but more the philosophy of life in relation with its impermanence. Hence education in India was born of this vision to achieve one's experience in the absolute as a spark of the divine and in this process practice of one's duty accompanies the acquisition of knowledge. In the modern school system value education, was termed moral education or moral science. Today most schools in India offer value education through school education. While private schools offer value education through class-wise books on value education others offer value education at special times in the school schedule e.g. assemblies, festivals etc. through
activities on special themes and topics of value education e.g. national integration, character building etc. Value education quotes are available on websites for special displays, use in essays on value education and for notes on value education.

**Importance of value education for children:**

While value education is important for children in schools, the curriculum includes various forms of value education by means of stories, power point programs, activities etc. Books, videos and source material on various topics of value education are provided to children. Several schools promote value education projects, and exposure trips. Schools run by the Montford Brothers like St. Columbus, and MSFS schools in India train children to be responsible and contributing citizens of the nation for a better world. The archdiocesan schools in Delhi impart value education, which is compulsory in all the seventeen schools. So to in the 150 archdiocesan schools in Mumbai value education takes prime place.

**Conclusion:**

The values or moral values present a true perspective of the development of any society or nation. They tell us to what extent a society or nation has developed itself. Values are virtues, ideals and qualities on which actions and beliefs are based. Values are guiding principles that shape our world outlook, attitudes and conduct. Values however are our inborn divine virtues such as love, peace, happiness, mercy and compassion as well as the positive moral qualities such as respect, humility, tolerance, responsibility, cooperation, honesty and simplicity.

In the present time moral degeneration are occurred. The main causes of value degeneration are: 

- Lack of respect for the sanctity of human life
- Breakdown of parental control of children in families
- Lack of respect for authority seen through the brazen breaking of the law and total disregard for rules and regulations
- Crime and corruption
- Abuse of alcohol and drugs
- Abuse of women and children and other vulnerable members of society
- Lack of respect for other people and property

To solve all these type problems it is necessary to know the main causes of the above problems. We know today children are tomorrow's citizens. If we give good education to the present day children, the future of the next generations will be well. My opinion education is
the solution for all types of the problems. Now we are living in the modern century. If we use science and technology in the proper way it is not difficult for us to solve all the problems of the non-moral and value things. The main object of the study is to inculcate moral and value based education in schools and colleges and to know the attitude of intermediate students towards moral values (Naraginty, Reddy).

Hogan (1973) believes that moral behavior is determined by five factors:

1) Socialization: becoming aware as a child of society's and parents' rules of conduct for being good.

2) Moral judgment: learning to think reasonably about our own ethics and deliberately deciding on our own moral standards.

3) Moral feelings: the internalization of our moral beliefs to the degree that we feel shame and guilt when we fail to do what we "should."

4) Empathy: the awareness of other people's situation, feelings, and needs so that one is compelled to help those in need.

5) Confidence and knowledge: knowing the steps involved in helping others and believing that one is responsible for and capable of helping.

Today we facing so many problems like terrorism, poverty and population problem. It is necessary to inculcate moral values in curriculum. Education is an effective weapon. Education is a weapon, whose effect depends on who holds it are his handstands at whom it is aimed. (Joseph Stalin)

**Curricular Activities:**

Due to liberalization, industrialization and globalization rapid changes are occurring in almost all social sciences. The value possessed and their attitudes according to the changes should be known up to date vast changes are occurring in the education. So called philosophical foundations of India are declining day to day with the country in a state of social turbulence, the goals and functions of formal education need to be reassessed and updated. Through education we can change the world.

- By giving a place for moral values in the curriculum.
- Moral values can be explained through stories and illustrations.
- Through poetry, novel and stories we can inculcate moral values in the students.
- Role plays of a good story in the lesson.
- Educate students through posters, advertisements and dramatizations; those are all a part in the curriculum.
- By introducing a course on moral values as a part of its Master Degree in Developmental Administration.
- Giving course training to students to develop moral values in the society.
- By educating citizen through direct contact by setting up local offices across the religion.
- First of all educate women in the society. Mother is the first teacher. Motivate every woman to know about moral values through special course like "Gandhian Studies".

According to Father of Indian Nation M.K.Gandhi:

“If wealth is lost nothing is lost
If health is lost something is lost
If character is lost everything is lost”

Best of all things is character.

In today’s scenario our values have been discarded by the new generation in the upcoming of the new fashion. In such a situation it is very important for someone to lay down basic principles for us so that we may lead a brightened life, no matter the stepping stones of success hit us hard we on the basis of these principles can guide our life. Thus value education completes this need very easily with an impact on the young minds making the world a better place to live in.

References:

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Constructivist Epistemology and Education

Dr. Ghanshyam Gupta

Introduction

Constructivism has emerged as an influential philosophical ideology in education in last two decades. The tradition of constructivism started from 18th century by Giambattista Vico, an Italian philosopher known as radical constructivist followed by Von Glaserfeld, Silvio Ceccato and continued in more recent by Jean Piaget. Since then many researchers and theorist have formulated different ideas about constructivism. Now a days Constructivism as an emerging epistemological orientation, is accepted and adopted by researchers and scholars in diverse fields such as educational psychology, sociology of knowledge, mathematics education, science education to instructional technology. Matthew writes “It has undoubtelly a major theoretical influence in contemporary science and mathematics education. In its post mordenist and deconstructionist form, it is a significant influence in literary, artistic, history and religious education. Constructivism seemingly fits in with, and supports, a range of multicultural, feminist and broadly reformist programmes in education. Although constructivism began as a theory of learning, it has progressively expanded its dominion, becoming a theory of teaching, a theory of education, a theory of the origin of ideas, and a theory of both personal knowledge and scientific knowledge. Indeed constructivism has become education’s version of the ‘grand unified theory’.”

There are three major constructivist traditions:

Educational constructivism:- it further can be categories in two strings one is termed as personal constructivism. It is also termed as cognitive constructivism and it has its origin in writing of Jean Piaget and at present chiefly enunciated by Ernst von Glaserfeld. Second, is termed as social constructivism which has its origins with Lev Vygotsky, the Soviet contemporary of Jean Piaget, in science education Rosalind Driver and in mathematics education Paul Ernest.
Philosophical Constructivism:- This variety of constructivism has its root in Berkeley’s philosophy of science and further back in instrumentalist philosophy of Ancient Greece. Its recent origin can be seen clearly in Thomas Kuhn’s work and is most robustly represented by Bas van Fraassen. Sociological Constructivism is identified with the Edinburgh ‘strong programme’ and their research on sociology of scientific knowledge. In this tradition the growth of science, and changes in its theories and philosophical commitments, is interpreted in terms of changing social conditions and interests.

The constructivist epistemology

The philosophy of constructivism is solely considered as epistemological one. It does not consider old theories of knowledge as idealist Plato, realist Socrates or other empiricist like Hume or Locke explained. It has its origin based on understanding of cognitive process through researches in psychology and sociology with philosophical insights. Stephen Fluery writes that “Two Philosophical principles characterize the constructivism the first is that knowledge is actively built by a cognizing subject......... a second foundational principle is that the function of cognition is to organize one’s experiential world, not to discover an ontological reality.” Grayson Wheatley proposed a very identical summary of the epistemological core of constructivism in following words “The theory of constructivism rests on two main principles. Principle one states that knowledge is not passively received, but is actively built up by the cognizing subject. Principle two states that the function of cognition is adaptive and serves the organization of the experiential world, not the discovery of ontological reality.......thus we don’t find truth but construct viable expansions of our experiences.”

In very simple terms we can understand that constructivism can be described as essentially a theory about the limits of human knowledge, a belief that all knowledge is necessarily a product of our own cognitive acts. We can have no direct or unmediated knowledge of any external or objective reality. We construct our understanding through our experiences, and the character of our experience is influenced profoundly by our cognitive lens. As lenses change, so seemingly does reality.

Scholars who believe that knowledge is constructed and it does not exist outside of learner also differs in opinion in various ways. Constructivist epistemology assumes that learners construct their own knowledge on the basis of interaction with their environment. Four epistemological assumptions constitute the heart and soul of constructivist approach to learning. These are as follows
1) Knowledge is physically constructed by learners who are involved in active learning.
2) Knowledge is symbolically constructed by those learners who make their own representation of actions.
3) Knowledge is socially constructed by learners who convey their meaning-making to others.
4) Knowledge is theoretically constructed by learners who try to explain things they do not completely understand.

Knowledge and its development have different meaning in constructivism. In spite of these differences they have some common consensus on following assertions

1:- Knowledge is a way of making sense of experience. The same process or product may be experienced by many, but knowledge about that process or product may vary for all individuals as they sense and perceive it differently. Knowledge is not something concrete outside the individual that can be swallowed and digested.

2:- Knowledge is an interpretation that depends on individuals’ ability, intelligence, previous experiences, past and prevailing situation, creativity, vertical and horizontal thinking, etc. therefore, knowledge is always open to uncertainty and varies with time. It is never permanent as it is always open to doubt.

3:- Learning and knowledge are two personal and private activities.

4:- Knowledge is a construction of reality. Some scholars say that human knowledge is a process of personal cognitive construction, or invention undertaken by the individual who is trying to make sense of his social or natural environment.

5:- Knowledge acquisition or learning is not the transfer of “nuggets of truth” to the individual, but a personal construction.

6:- learning is determined by the Interplay among learners’ existing knowledge, social context, teaching learning environment and the problem that is to be solved

Donald J. Cunningham and Thomas M. Duffy have identified two major similarities in various constructivist theories. Firstly Learning is an active process of constructing rather that acquiring knowledge. Secondly Instruction is a process of supporting that construction rather than communicating or transmitting knowledge.

**Principles of Constructivism**

Two main ideas that can be termed as the principles of constructivism are

1- the learner is unique individual. Learner is not passive entity but an active cognizing subject. The individual plays an important role in learning and development of
knowledge. Knowledge is not passively received or absorbed by the learner but actively built by him. Moreover knowledge can not be transmitted from one learner to another learner. Each learner has to construct their own knowledge.

2- The function of cognition is not the discovery/representation of the world but adaption. That is to say that cognition performs the function of organizing the learner’s experiences of the world. Truth and reality are not the important notions related to knowledge. What is of significance is that the learner construct a viable explanation of his experiences. It is not important whether these explanations are factually correct or true picture of the reality, but rather that they are self-constructed by the individuals. The major goal of the cognition is thus not the representation of an objective independent reality but our own attempt to understand and organize it. In order to do so we create a version of it by our own selves. This is the process of construction on knowledge.

Since various models, theories, approaches to constructivism have evolved during fifty years but some of them share some common core of epistemological concerns. These can be enumerated as

Knowledge is constructed rather than transmitted or acquired
Knowledge construction takes place through the process of reflective thinking and reflective abstraction.
Learning process or construction of knowledge is facilitated by learners’ cognitive structures.
Learners’ cognitive structures continuously develop.

Characteristics of Constructivist Learning

Constructivist’s arguments in support of construction of knowledge though self experiences and creating meaning of words with relation to the past experiences emphasizes on the drastically changed pattern of learning from behaviourism and other old psychological and philosophical theories of epistemology. A newer version of positivism slightly different from older become popular amongst educationist and persons involved in teaching and learning of science and mathematics advocating active participation of children in process of knowledge generation. Since last 15 years the constant attempt in this direction has created a lot of contribution. Consequently different approaches for enhancing learning environment has been devised.
From the works of Wilson and Cole, Paul Earnest and others characteristics of constructivist learning and teaching are mentioned below.

1- Goals and objectives are derived from the learner or with negotiation with teacher or learning environment.
2- Learner’s meta cognition, self analysis-regulation, reflection and awareness is encouraged through activities, providing opportunities, tools and environments.
3- Learning situations, environments, skills, content and tasks are relevant, realistic, and authentic and represent the natural complexities of the ‘real world.’
4- Teachers serve in the role of guide, monitors, coaches, tutors and facilitators.
5- The learner’s previous knowledge, beliefs and attitudes are considered in the knowledge construction process.
6- In this paradigm emphasis is made on construction of knowledge not on reproduction of knowledge. It takes place in individual contexts and through social negotiation, collaboration and experience.
7- Collaborative and cooperative learning are favoured in order to expose the learner to alternative viewpoints.
8- Multiple perspectives and representations of concepts and content are presented and encouraged to develop understanding for construction of genuine knowledge.
9- Scaffolding is facilitated to help students perform just beyond the limits of their ability.
10- Primary sources of data are used in order to ensure authenticity and real-world complexity.
11- In constructivist environment, errors are used as provider of the opportunity for insight into students’ previous knowledge construction.

Jonassen (1994) mentioned eight attributes of the learning climate that can be regarded as the constructivist learning environment.

1- It is characterized by multiple representation of reality.
2- The complexity of the real world is evident in these representations.
3- Authentic tasks are regarded as important learning situations.
4- Learners are encouraged to reflect on experiences.
5- Knowledge construction rather than knowledge reproduction is emphasized.
6- Opportunities are arranged for real world setting or case based learning.
7- Knowledge construction is not separated from the content or context.
8- Social negotiation and collaboration among learners are encouraged. Here in constructivist model of knowledge imports several meaning to be understood important in every process of education which is chiefly concerned with the development of learners knowledge base, to teach them how to learn and think, to facilitate in each respect to develop his mental abilities and capacities to establish him as a critical analyzer or thinking agent of human society. All his prior belief, knowledge experiences are structured in meaningful way to create his new knowledge base for further development mental schema so that he can adjust himself with the changing concerns of the society and environment. It also emphasis on the self pacing, also self correction of the errors committed in daily life and they also teach him how to deal with and interpret new challenges in light of previous learning. Teacher will organize his teaching material in very logically connected way based on prior knowledge and according to the cognitive processes that are happening in the mind of the students. All the co operative learning techniques will be used to frame the correct form of knowledge, and teacher can shape the discussion to create almost acceptable with minimum differences in the interpretations of each individual. This very crucial act is although difficult but it will lead to students towards understanding of pre established facts, knowledge components that were established by rigorous scientific methods and through the collective experiences of a large community of scholars. Adopting and applying these precautions a teaching –learning process based on constructivism will be acceptable to all and this epistemology will lead to all other epistemological tradition.

Conclusions

It is clear from above discussion that constructivism is centered on the idea that body of knowledge is constructed actively by the learner and all human knowledge is the product of this conscious effort of creating knowledge through past experience. Knowledge is not passively received from others like authority, texts or environment. There is no absolute or impersonal knowledge but it is always someone’s knowledge about some thing. It is created or constructed by the experiencing individual. All the discussions are centered around the issue how knowledge is constructed in learner’s mind and what cognitive processes happen in the mind. How do learner actively build or construct the new knowledge? They do this on the bedrock of their prior knowledge or experience. They rely on the fact that knowledge involves mental constructs that are constructed from past experience whether these constructs or structures are valid, truthful or incomplete is not important. The truth content of this knowledge is insignificant. If the known is made, there is no singular, universal absolute
knowledge; if reality is pluralistic, then it is meaningless to search for or create dispute about what is the truth in platonic sense. All educational discourses should be emphasized on mutually negotiable, commonly shared meaning created by students and teachers in their class room situations or other learning environment. For students his/ her knowledge construct is viable one, as it suffices the purpose of organizing his/ her experiences of his world. For the persons who have attained higher position in hierarchy of the process of generation of knowledge, this knowledge construct may not be acceptable as it falls way short of what can be regarded as valid knowledge. It is not difficult to understand that idea of non-congruence between knowledge and reality, as the main function of the knowledge constructs is to organize the ongoing experiences of the learner and not mirror reality. The students or other cognizing agent tends to reformulate their existing experiences or knowledge constructs by connecting them to the new experiences of the world. This is what we mean when we say that in a constructive settings, knowledge is always subjectively in nature. Thus it implies that these assumptions and beliefs of constructivism makes us free from any utopia of ideals and ideas those were continuously penetrating in the minds of students as a permanent slogan of knowledge and butchering there thought processes. The major hindrances for the creative thinking, confidence on findings based on self understanding and reasoning were removed effectively through the teaching-learning processes based on constructivist education. This creates a more happy and self created world which is a more peaceful, free from inner conflict and monopoly of authority. It leads us towards a mutually respected, tolerant educated society.

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Unesco’s Four Pillars of Education, Implications for Schools

Dr. Preeti Shrimal

Prof. M.P. Sharma

Introduction

If education is to succeed in its onerous task, it must be organized around the four fundamental types of learning which throughout a person's life, will in a way be the pillars of knowledge: Learning to Know – that is acquiring the instruments of understanding, Learning to Do – so as to act creatively in one's environment, Learning to Live Together – so as to participate and cooperate with other people in all human activities; Learning to Be – an essential progression which proceeds from the previous three culminating in the development of every child's personality so that he/she is able to act with greater autonomy, judgment and personal responsibility.

The school curriculum in the light of future challenges of the twenty first Century is expected to address these issues seriously. How far have our schools been able to equip themselves in the light of the guidelines and issues highlighted by various National and International reports on Education like Unesco’s Delor's Report, National Policy on Education, Curriculum frameworks drawn up by NCERT etc.? How far have the schools made provision in their curriculum with respect to these Four Pillars? Are the different education Boards weaving their curriculum and scope of syllabus around these Four Pillars? Are the guidelines recommended by this seminal document being implemented in the school practices? These are some of the questions which motivated the researcher to undertake this research work.

In a nutshell, the concept of learning throughout life, personality building and community living emerge as the keys to success in the 21st Century.

Education has to meet the challenges of a rapidly changing world and at the same time reflect on some of the major issues facing the world today. It will have to make the pupils aware of the concept of the world as a family of nations, nurture respect for the distinct culture of each nation and develop an understanding of the interdependence of nations in different spheres.

All the above questions and issues were addressed in the present research entitled as "Education for Learning to Know, Learning to Do, Learning to Live Together, Learning to Be – implications for secondary schools."
Objectives of the Study

The specific objectives determined for the present research were as follows:-

1. To study the main education policies at the International and National Level in the light of
   (a) Education for learning to know
   (b) Education for learning to do
   (c) Education for learning to live together
   (d) Education for learning to be

2. To analyze the existing programs of the schools in the light of
   (a) Education for learning to know
   (b) Education for learning to do
   (c) Education for learning to live together
   (d) Education for learning to be

3. To study the opinion of the Teachers/Educational Administrator and Educational planners with regards to the provisions, practices and prospects related to the above four pillars of education.

4. To give suggestions for further modifications of school programme for effective realization of education related to the four pillars

Methods, Tools and Techniques

The UNESCO's report of the Delor's Commission on Education has been in the background of this work of research. The major features of this report with specific emphasis on the four pillars of education formed the base of this research. Besides policy documents like National Policy of Education 86, NCF, 2005 were also analyzed in the light of education of four pillars. Since the present study was intended to study the existing status of the Four Pillars in the light of the various policy documents and school curriculum, the investigator chose the survey method of research. This study was limited to the six different types of schools located in Udaipur city and adjoins area. Stratified sampling procedure was used under which 60 teacher and 6 principals were selected through purposive sampling. Details are given in the Table.

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<thead>
<tr>
<th>Board</th>
<th>School</th>
<th>Teachers</th>
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<td>Central Board of Secondary</td>
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<td>Novoday Vidyalay</td>
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<td>Education</td>
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<td>Rajasthan Board of</td>
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<td>Secondary Education</td>
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<td>Public School</td>
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<td><strong>Total</strong></td>
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The researcher used self-made opinionnaive as interview schedule for studying the opinion of teachers and principals. Besides, detailed analysis of important Education Policy documents school calendar and curriculum was also done in the light of Education of four pillars. The data was analyzed by employing both simple quantitative as well as qualitative techniques.

**Findings of the Research Study**

The major findings of the study were as follows.

Almost all the Policy documents were of the view that the present school curriculum lays undue emphasis on bookish learning and memorization without comprehension. The books and syllabi place undue stress on children to become aggressively competitive and exhibit precocity. Although memory is regarded important, it has to be associative memory and not just a mechanical process...

The documents analyzed in this research, were strongly of the view that the curriculum content at present was far removed from the real world with a wide gap between classroom teaching and its connect with day to day life and experience. Obsolete, redundant and overlapping content in the curriculum had to be weeded out and upgraded to keep pace with the current knowledge driven society. Thus, if education has to succeed in its tasks, curriculum in its core should be redesigned and restructured around the four pillars of learning.

Learning had to imbibe in the students a mindset of pursuing lifelong education and at the same time equip them with competencies and skills needed for employment opportunities in the future. There is a wide gap between the world of work and the world of study since our system of education alienates the students from real life situations thus making them unfit for gainful employment. The classroom had to replicate the community outside and adopt a holistic approach catering to the intellectual, moral, cultural, and physical dimensions of the personality.
A paradigm shift in the approach to education is required in order to make it productive and socially relevant.

Delors report considers education as an agent of positive change, which needs to nurture and build an attitude of open mindedness and flexibility in the students so that they can effortlessly adapt to the demands of a cut throat competitive world. It states that learning needs to be interactive, experiential, and participatory and be based on emotion and experience; only then will it cater to the all rounded development of the ‘complete being’. The documents studied define the aim and objective of education to be the dissemination of academic excellence and not ‘academic adequacy’. The individual is envisaged as a global citizen by all Policy documents studied.

Creating a shift in the mind sets of the students from the micro to the macro, from individual to collective goals is thus imperative. The programmes in the schools require laying more stress on cooperative living, sense of mutual understanding and creating awareness about the interdependence of all humans in the present global scenario which is becoming increasingly multicultural.

Analysis of the calendar of activities of Schools inferred that all the schools had their own calendar of activities for the complete year encompassing both curricular and co-curricular activities pertaining to the overall development of the learners. However it appeared that appropriate weight age had not been given to all the components of the Four Pillars of learning with more emphasis being given to sports and cultural activities, while components like work ethics, motivational seminars, life skill development etc. are not mentioned in the annual school schedules.

The calendars also revealed that most of the schools had a comprehensive programme of sports and games, intra and interschool competitions, club activities, cultural activities, literary activities, outdoor visits and field trips. However, activities which impart respect for work and dignity of labour also need to include in the school calendar.

Encouraging students to become curious and lifelong learners was felt to be one of the most pressing needs of the present school scenario according to the school Principals. According to them adequate opportunities are given to students to unleash their creativity and develop their imagination and thinking ability through specifically designed programmes. Life skill and value education programmes have also been
devised by the schools to develop in the students traits like respect, integrity, honesty, truthfulness, independent and critical thinking.

The common goal which all schools were striving to achieve was to nurture students to become dynamic and enterprising in action, innovative in their approach, good problem solvers and excellent team players in life.

In the opinion of the teachers, most of the schools were over emphasizing rote learning and bookish knowledge rather than behavioral skills like effective communication, right attitudes, language proficiency etc.

The teachers suggested that the components related to ‘Learning to Live Together’ were not adequately reflected in the school curriculum. There is a need to instill in students a spirit of mutual coordination and peer solidarity, Inculcate qualities of mutual respect, understanding, empathy, sharing and caring, and collaborative skills in students. The components of the Pillar ‘Learning to Be’ need to be given prime importance in schools and new types of skills like interpersonal, emotional and attitudinal skills need to be imbibed in the students to augment their personality.

The teachers felt that there was a need to give greater emphasis to conducting community service and honing vocational skills in schools

Suggestions

On the basis of the study conducted the following suggestions may be made:

• There needs to be a shift in the focus of the current discipline – based bookish learning and rote method to concept learning whereby students can construct their own knowledge and learn by association.

• According to the UNESCO (2004) “in the changing educational scenario, curriculum has to be a dynamic process of actual learning acquisition and inquiry of the unknown through teacher – learner interaction and cooperation” Thus the curriculum should have a linkage between education and the real world in its content so that students can relate with it. The present disconnect and the yawning gap between real life and education needs to be bridged and learning needs to extend beyond the class room and school.

• Curriculum has to be made more dynamic and vibrant and include more contemporary issues and contexts, weeding out obsolete and outdated topics and content. It needs to have an integrated and interdisciplinary approach and flavor.
Implications

**Implications for curriculum planners and Policy Makers**

- The present curriculum needs to be revised and reviewed so as to become more relevant and related to the present global scenario. A more balanced approach is required when planning the activities in the school programme so that aspects like creativity, imagination and talent are brought to the fore and nurtured.

- The curriculum planners may also take into consideration the gaps at the prescribed level and the transactional level so that education can become more effective and meaningful.

- Curriculum planners will be able to redesign the secondary school curriculum by incorporating the important elements as reflected in the four pillars of education. They may also get guidelines for planning orientation programmes for teachers for enabling them to handle school programmes for realizing the objectives of education as reflected in the Four Pillars of the learning.

**Implications for Teachers and Teacher educator**

- Teachers will be able to understand their changing role in the light of the Four Pillars, giving them a new direction and vision. Also, this will help them in identifying appropriate teaching learning strategies for realizing the goals related to the Four Pillars of Education.

- Appropriate transactional strategies in relation to the Four Pillars of Education need to be identified and used by the teachers so that the desired objectives are achieved.

- The insight gained by the teachers will enable them to focus upon the components related to the Four Pillars of Education while transacting the curriculum in the school.

- The research finding will be useful for teacher educators and teachers from the point of view of incorporating the strategies related to education of Four Pillars so that the future teachers are sensitized and equipped for addressing these issues.

- Teacher Training programmes need to be reorganized in the light of Education for four pillars. NCT and NCERT may also take appropriate steps to revamp the secondary school teacher education Programme, Training programmes need to be developed to empower and enrich the professional competencies and skills of teachers.

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Measures for Improving Quality of Teacher Education

Dr. J D Singh

Abstract

Teachers are the greatest assets of any education system. They stand in the interface of the transmission of knowledge, skills and values. Teachers are the torch bearers in creating social cohesion, national integration and a learning society. Teacher education plays vital role in reforming and strengthening the education system of any country. Training of teachers has emerging global trends in education and the overall needs and aspirations of the people in India. As an integral part of educational system, teacher education in India has to be responsive to socio-cultural ethos and national development. The National Council for Teacher Education has to initiate suitable measures to make teacher education at various levels responsive to such developments as well as to quality concerns in future. This paper presents the development of teacher education, major problems facing in present time and probable measures for improving quality of teacher education in India in their new roles and responsibilities of the 21st century.

Key words: Education, Quality, Teacher Education, Knowledge Commission

Introduction

Teacher education is the process of providing teachers and potential teachers with the skills and knowledge necessary to teach effectively in a classroom environment. Quality of education plays important role in the process of development of nations. Hence, quality concerns in education are national priorities for all nations. Quality is multiple perspectives and is not a unitary concept (Newton 2007, p.14). The dimensions of quality in education include achieving pre-determined targets and objectives. Enlightened, emancipated and empowered teachers lead communities and nations in their march towards better and higher quality of life. They reveal and elaborate the secrets of attaining higher values in life and nurture empathy for the fellow beings. They not only disseminate knowledge but also create and generate new knowledge. They are responsible for acculturating role of education.

When we talk about the quality of higher education before teacher education, it can said according to the London Times Higher Education (2009)- Quacquarelli Symonds (QS)

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World University rankings, no Indian university features among the first 100. But universities in East Asia have been included in the first hundred. Hong Kong has three, ranked at 24, 35 and 46; Singapore two ranked at 30 and 73; South Korea two ranked at 47 and 69 and Taiwan one in the 95th position. Notably, China's Tsinghua University and Peking University are ranked at 49 and 52 respectively. There is no Indian university in the rankings from 100 to 200. It is only when one moves on to the next 100 that we find the Indian Institute of Technology, Kanpur at 237; IIT Madras at 284 and the University of Delhi at 291. During these years, large scale and far reaching developments as well as changes have taken place on the national and international scenes in social, economic, cultural, scientific and technological spheres as well as in information and communication technologies. These developments have affected education, including teacher education necessitating review and reform of Indian teacher education.

Education is the essential foundation of a thriving and innovative society. The quality of education in a society is no less important for economic development. As competition among economies becomes more intense, the importance of education as the key to future success intensifies. The quality of teachers is, to a large extent, determined by who are attracted to enter the profession and how they are trained. The community expects teachers to be sufficiently knowledgeable in the subjects they teach and proficient in pedagogy. One of the best ways to achieve this is to enhance teacher education programmes so as to train high quality teachers for schools. The task of bringing qualitative change in institutional efficacy of the teacher education system in itself is a huge and challenging one.

**Development of Teacher Education**

Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors, and skills they require to perform their tasks effectively in the classrooms, school and wider community. It aims at imparting professional skills and techniques to the teachers under training. Various Commissions and Committees appointed by the Central and the State Governments in recent decades have invariably emphasized the need for quality teacher education suited to the needs of the educational system. The Secondary Education Commission (1953) observed that a major factor responsible for the educational reconstruction at the secondary stage is teachers' professional training. The Education Commission (1964-66) stressed that 'in a world based on science and technology it is education that determines the level of prosperity, welfare and
security of the people' and that 'a sound programme of professional education of teachers is essential for the qualitative improvement of education.'

The National Commission on Teachers (1983) studied in depth the problems of teacher education and the status of teachers in society. Its main recommendations were directed at enhancing the period of training, change in selection procedure of teachers, making the pedagogy of teacher education meaningful leading to enrichment of the theory courses and practical work. It suggested changes in the structure of M.Ed. programme also. On the basis of these suggestions, another curriculum framework was issued in 1988 but it could not catch national attention because the work on NPE (1986) had already started, and which opened new vistas in teacher education. In pursuance of the NPE 1986 a major step was taken by the Central Government to enhance the professional capacity of a large number of teacher education institutions. The DIETs were charged with the responsibility of organising pre-service and in-service programmes in addition to being the nodal resource centres for elementary education at district level. Likewise, the responsibility of introducing innovations in teacher education programmes at the secondary and higher secondary stages and in vocational education was given to Colleges of Teacher Education (CTEs) and Institutions of Advanced Study in Education (IASEs). NPE (1986) was followed by a Programme of Action (1986), which provided details about the needed transformation of policy into action. Its emphasis was on the enrichment of both in-service and the pre-service teacher education programmes, computer education and new as well as alternative models of teacher preparation.

As a statutory body responsible for the coordination and maintenance of standards in teacher education, NCTE issued a Curriculum Framework for Quality Teacher Education in 1998. Before issuing it, the Council sought and ensured a national consensus in its favour. This is a comprehensive document that deals with almost all aspects of teacher education including its context, concerns and also the social philosophy of teacher education in Indian society which contemplates a synthesis between unity and diversity, freedom and compulsion, social planning and individual initiative. Its salient features were:

* Increased duration and multiple models of teacher education;
* Updating of theoretical and practical components of teacher education by giving new orientation and adding new inputs to the existing programmes;
* Emphasis on developing professionalism, commitment, competencies and performance skills;
* Optimal utilization of the potentialities of community, university and information and communication technology for preparation of teachers;

* Making provisions for preparation of teachers for the neglected sections of society, and

* Suggesting alternative educational programmes for teachers of gifted children, teachers of senior secondary schools and specialized programme of education for teacher educators.

Besides, there were other suggestions too which were well received by the nation. Some of its recommendations were implemented. But all of them could not be put into practice due to various reasons.

**Some Major Problems in Teacher Education**

Present teacher education is inadequate in respect of both quality and content. The teacher-student relationship is far more complex and demanding than ever before. The implication of this more diversified role for the teacher is what impelled a new view of the process of teacher education and training. Quality of teaching also depends on certain physical resources such as provision for power point presentation, separate cubicle or room for each teacher and facility for internet browsing, taking print out, Xeroxing therein. Availability of such facilities motivates the teachers to become more effective that upgrades the level of curriculum transaction. India possesses one of the largest systems of teacher education. Besides, the university departments of education and their affiliated colleges, government and aided institutions, private and self-financing colleges and open universities are also engaged in this venture. The programmes are almost identical but the standard varies. Certain institutions are being run with motives other than educational. In certain areas, the supply of teachers far exceeds the demand while in others there is acute shortage and unqualified teachers are working under different names. The manpower planning is practically absent in teacher education.

Institutes of Advanced Study in Education (IASEs) offer in-service and pre-service programmes of secondary education and also doctoral research programmes. A few other training colleges have been designated as Colleges of Teacher Education (CTEs). One elementary teacher training institution in every district has been designated as District Institute of Education and Training. The situation at the elementary level in certain states is comparable to international standards, where DIETs, CTEs and IASEs are making tangible impact on pre- and in-service teacher education. In most of the cases, the scheme reflects a
huge wastage of material as well as human resources. Most of the Principals are not well qualified even they have no M.Ed. or higher level degree. While some of these institutions do not function with heads and faculty members having at least B. Ed. qualification, a few function without adequate work load, as the concerned State governments do not give funds for conducting in-service programmes for school teachers. The scheme also gives support to State Councils of Educational Research and Training (SCERTs) that even has Directors without a B. Ed. qualification or school teaching experience. The Regional Colleges of Education of the National Council of Educational Research and Training have been running their courses with the help of contract teachers who are paid on hourly basis. This is not a case of paucity of fund, but a case of ineffective management.

During the last two decades, the teacher education curricula have received severe criticism and their weaknesses have been well exposed. The students are not exposed to the realities of school and community. Internship, practice of teaching, practical activities and supplementary educational activities are not paid proper attention. The curriculum, pedagogy and evaluation of teacher education need improvement and radical transformation. Some educationists and social activists call it vapid, irrelevant because they do not prepare teachers who can impart quality education in our schools. One often hears that there is little difference between the performance of trained and that of untrained teachers because of the outdated and defective curriculum. To some extent, these charges may be somewhat; exaggerated often they seem to be correct.

During the last decade, new thrusts have been posed due to rapid changes in the educational, political, social and economic contexts at the national and international levels. Teacher education by and large, is conventional in its nature and purpose. The integration of theory and practice and consequent curricular response to the requirements of the school system still remains inadequate. Teachers are prepared in competencies and skills which do not necessarily equip them for becoming professionally effective. Their familiarity with latest educational developments remains insufficient. The system still prepares teachers who do not necessarily become professionally competent and committed at the completion of initial teacher preparation programmes. A large number of teacher training institutions do not practice what they preach. Several of the skills acquired and methodologies learnt are seldom practiced in actual school system. In the National Knowledge Commission’s final report which states that “The training of teachers is a major area of concern at present, since both
pre-service and in-service training of school teachers is extremely inadequate and also poorly managed in most states” (NKC 2009, pp. 44-45).

Frequently criticized as being theoretical in its nature, the curriculum of teacher education is only partially theoretical. It is information loaded which are disconnected from each other. The curriculum framework of 1998 pointed out this weakness to an extent but the situation could not improve for reasons known to all. There is the pressing need to integrate scattered information’s for giving them the shape of a discipline capable of promoting educational theory and practice. During the last five decades certain efforts have been made to indigenize the system. The gaps, however, are still wide and visible. The imperatives for building the bridges may be as follows:

- to build a national system of teacher education based on India’s cultural ethos, its unity and diversity synchronising with change and continuity;
- to facilitate the realization of the constitutional goals and emergence of the new social order;
- to prepare professionally competent teachers to perform their roles effectively as per needs of the society; and
- to upgrade the standard of teacher education, enhance the professional and social status of teachers and develop amongst them a sense of commitment.

These are but a few of the major concerns which call for an immediate action. A comprehensive, dynamic and responsive system of teacher education needs to be continually evolved keeping the overall scenario in view.

**Few Measures for Improving Quality of Teacher Education**

Quality of an institution or a programme is generally considered on the basis of placement of its products. It is ascertained from quality of material and human resources. Various factors that affect quality are: finance, sincerity of faculty and students and management, skills of management, skills of teaching of faculty members, and quality of brain of students. In order to accelerate qualitative improvement in higher education, National Knowledge Commission (2009, p. 166) recommended establishment of 30 new Central universities, 16 in States where they do not exist and 14 as World class universities (all India admissions, course credits, regular syllabi revision, incentives for faculty, strong linkage with industry and research institutions, no affiliated colleges, outsource nonteaching functions (P.166). The main indicator of the quality of teacher education can be visualized in terms of its products the learners achievement both in scholastic and co-scholastic areas i.e. the performance in
various subjects of study and habits, attitudes, values and life skills necessary for becoming a good citizen. The need of teacher man power planning has resulted in mushrooming growth of teacher education throughout the country. The following measures may be helpful for improving quality of teacher education:

1. To provide professional development for practicing in-service teachers by updating their knowledge and skills;
2. Effectiveness of the new initiatives curricular reforms;
3. Intensive use of ICT for school education and also involvement of the community;
4. To adopt innovative Teaching strategies in teacher education and Improving educational administration practices;
5. To evolve strategies to enhance professional competency in teacher education;
6. To provide expert advice to local schools upon request;
7. To analyse the future of teacher education institutions;
8. To provide Infrastructure facility in teacher education;
9. Teacher education and professional competence of teacher educators;
10. Spreading sense of ethical values in teacher education; and
11. Modern and latest communication and knowledge management for quality teacher education.

It's the right time that every institution and educationalist should take care, that quantitative expansion should not slip the quality.

Conclusions

Quality issues in teacher education will therefore, revolve around the quality of infrastructure and support services, opportunity time, teacher characteristics and teacher motivation, pre-service and in-service education of teachers, curriculum and teaching-learning materials, classroom processes, pupil evaluation, monitoring and supervision etc. Indeed improvement of quality in these parameters and its sustenance is a matter of grave concern for the whole system of education. Academic and professional skills are not independent of each other. Teacher Education curricula have to integrate and blend them into a composite whole likes the curricula of medical sciences. The reconstruction of teacher education curricula has, thus, become a pressing need of the hour. It has to be transformed from information based to experience based. Since the teachers play a major role in education of children, their own education becomes a matter of vital concern. The National Council for Teacher Education has to initiate suitable measures to make teacher education at various
levels responsive to such developments as well as to quality concerns in future. Teacher education must, therefore, create necessary awareness among teachers about their new roles and responsibilities.

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The Idea of University: Perspective of Indian Academia

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Higher Education is at the forefront of change. During the last 853 years in the world and 150 years in India, the University has nurtured many great minds who on the one hand have served the humanity in their own typical ways and on the other hand they have expressed their love, views and expectations from university.

Great thinkers of the world, both Indian and Western, lived by their ideas and fantasies, which ultimately changed the world and the education system. The idea of university held by an individual may depend broadly on his/her needs and expectations from university, his/her cultural, social, political and economic background and his exposure to the world of higher education. The idea of university held by different sections of society is bound to differ because of their environment and perception. People in different walks of life have different perceptions and idea about University. The stakeholders’ idea of university is more in terms of expectations from it whereas the idea of university held by the students and other beneficiaries may be in terms of better infrastructure and facilities. The industrialists, scientists and other important professional people have different ideas and concepts of a university depending upon their professional receptivity and perspective. Similarly the academicians may hold a different idea of university. Since the university is an academic institution, the academicians’ idea of university may be more important to study. The present research has tried to address this question.

Very few attempts have been made in India to systematically analyze and assess the academicians’ idea of a University institution. It was felt that the assessment of the expectations of the academicians be done as they are the key individuals associated with the development of the institution. What is the academicians’ idea and concept of a university? How is this idea different for those academicians who are limited to any particular university or have had an exposure to universities abroad? The expectations of academicians today from this age-old institution should be a matter of concern and investigation for the

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stakeholders, beneficiaries, policy makers and nation builders at large. This may provide important perspective for guiding the system into future operation.

This study does not want to prescribe a generalized theory about the 21st century university in India, but to build up the idea of the academicians of the university from the bottom, by considering, first, the environments- the demographic, socio-economic and intellectual- in which higher education finds itself and secondly, its likely response to these new challenges. Out of higher education’s detailed accommodation to these new environments and more broadly, the synergy between the socio-economic and academic systems, it may then be possible to construct an ‘idea of the university’ that is rooted in practice but has normative force.

Research on the expectations from University is still a neglected area in India. The teachers of University of Lucknow voiced their expectations regarding different aspects of their university (Varma, Sodha and Soni, 2007)\(^7\). The university teachers expected a redefinition of the role of university in the present global scenario. The study indicated a need for reforms in the university which policy-makers and the stakeholders should focus their attention on. In USA, the universities themselves as well as academicians have contributed to research in this area. A study was conducted on Expectations from the college System (Woodard Blenda, Ann, 1978)\(^8\). The obtained expectations were compared with the present achievements of the Virginia Community College System when it completed 10 years. The study yielded prognosis for the future of the college system as highly positive changing community conditions, industrial sector and demography.

An attempt was made to study the Perceptions of University image of East Tennessee State University. (Jane Myers Jones, 2002)\(^9\). The study is a reflection on how the internal and external stakeholders of universities in USA are conscious of the University’s image in the community. The universities themselves keep on surveying the perceptions of their image

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\(^7\) M. Varma, M. S. Sodha, & Rashmi Soni, 2007. Teachers’ Expectations from their University: A study in the Context of University of Lucknow. Journal of Indian Education, NCERT, XXXIII (2), Pp 70-84.


held by the stakeholders. Jones interviewed the focused groups of select members of the internal academy and the external communities to examine the extent of congruency between and within two constituencies. Results showed that incongruencies existed between external and internal stakeholders concerning their emphasis on University Image. The academy focused on process and external constituencies focused on outcomes and products.

Such studies have valuable implications for the research on Idea of a University Institution.

**Methodology**

Forty-one academicians belonging to different Indian universities, especially from the North India, were interviewed to explore their Idea of a University. This group consisted of three types of academicians: Academicians who have the exposure of only a single University, those who have an exposure of some important Indian universities, and those who have the exposure of universities abroad. The underlying hypothesis was that the exposure of academicians to various higher education institutions enriches his/her idea of a university. The hypothesis formulated for the present study can be stated as under:

1. The Universities started in India more than 150 years ago i.e. during the British rule. These were the examining bodies and had affiliating character. Afterwards a few residential and teaching universities were also established. Barring a few universities with nationalistic fervor and indigenous character (like Banaras Hindu University, Vishwabharti Shanti Niketan, Aligarh Muslim University, and Gujarat Vidyapeeth) most of the Indian universities today are running under the cultural hangover of the colonial period. India has comparatively a shorter history of modern university as compared to that of European and American Universities. This gives birth to a hypothesis that the sampled Indian academicians will reflect a limited vision and idea as far as the university institution is concerned.

2. A good number of Indian academicians have studied or worked in several universities in India and thus are exposed to various types of academic cultures and environments of higher education. It may be hypothesized that their idea of university will be grounded in the soil of indigenous socio-cultural background.

3. There is another category of academicians working in Indian universities who are exposed to the universities and higher education institutions of various countries. It may
be hypothesized that such widely exposed, travelled and experienced academicians will express quite versatile, creative, broad based and modern idea of a university institution.

The collection of data was done by interviewing the academicians in open conversational sessions. The views expressed by the academicians were recorded, formulated into transcripts, content analyzed and finally synthesized to find out their idea of university.

The findings of the study are based on the responses of only forty-one academicians who were interviewed on their idea of a university institution. The sample is geographically scattered in various parts of the country and the academicians belong to various State and central Universities. However, the academicians in the sample group predominantly come from universities in North India. While generalizing the findings this limitation is to be considered. The study does not claim to reflect on the national sample as a whole.

Findings

Idea of a University: Perspective of 17 Academicians having exposure of only a single University

University as a retainer of intellect is a source for the creation and generation of knowledge of every kind. It is a place where ideas are created within a democratic atmosphere and which provides an opportunity for both teachers and students for global learning to ultimately connect to the global world. It provides an intellectual freedom to interact openly with each other. It is not just an institute to conduct examinations or provide degrees; rather it is a place to develop the individual faculties and to develop the overall personality of the student. University should be a place for learning, largely connected with the rest of the world, helping it self in a more concentrated way, to think cohesively, coherently, imaginatively and creatively and then contributing back and forth by helping everybody to reap the benefits.

Universities in India are not completely accepting the changes taking place over the world. Teaching and research have been considered to be the main functions of university. Consultancy and extension is another important function of the university. It was also felt by the academicians that the research implications should be taken to the society because the main function of the University is to provide leadership to the society and develop trained
manpower to look into the problems of the society and to form the clear-cut policies for the same. Every department of the university should work for the society. Involvement of parents in the programmes of the university has also been considered as important. University has a large youth force and energy lying latent. This energy should be channelized which will help to regulate the student unrest in the universities. The academicians also forcefully emphasized the university and industry interaction.

University should provide empowering education, which can expand the frontiers of knowledge and not just create new boundaries of knowledge. It should help people to think critically. Undoubtedly university has to produce men for the industry, but today there is too much technical orientation of the university courses and more and more market-oriented courses are attracting the attention of the students. Therefore, many academicians idealized that University is not just meant for professional development. It should also cater to basic fundamental disciplines and general education.

For the academicians an ideal university is a place where there is academic atmosphere, freedom and discipline. University is basically established to create and to preserve knowledge and to add something by research. But specialized knowledge of various fields is also essential for the overall development of the personality. There is a need to inculcate the spiritual attitude in the students by the teachers. The academicians strongly felt that a university teacher should understand the students’ needs, interests and aspirations, strengths and weaknesses and must guide them accordingly. There must be free and open interaction between the teacher and the taught.

Idea of a University: Perspective of 12 Academicians exposed to a variety of Indian universities

These academicians felt that university education has to be differentiated from primary and secondary education. University should maintain and create a culture of higher-order thinking, which should manifest sincerely in the university staff. University is an apex educational organization and it has to regulate a gamut of academic activities. It is the highest seat of learning, a storehouse of knowledge and a generator of innumerable ideas. University is a social institution in search of truth, a place meant for creating, modifying, replacing and
refining knowledge and to build up new theories. The University institution should be humanist and liberal in nature, where visionary people openly and freely adventure in ideas.

For the academicians the University should be without walls with a scope to accommodate people from different fields. People from any part of the country should find relevance in the university. Thus, the idea of a university for the academicians is very broad. Historically the role of university has changed. Universities have been treated as ivory towers, established away from the hustle-bustle of the society. But it cannot be devoted purely to academic pursuits and academics cannot be away from the realities of society. Main purpose of university education should be to produce good and productive citizens and to provide leadership in all walks of life.

Academicians expected a university teacher to perform five important functions - teaching, research, dissemination, reference and extension work. Teachers should update themselves from time to time. They should be specialists in their subject but at the same time must be aware of other subjects too. Education provided by the teacher should arouse curiosity in the students. He should be able to quote his own experiences and must have an experimenting attitude and seriously involved in researching and publishing some good books and papers.

University should fulfill a social cause, as it is an instrument of social change. Extension has been considered as an important function of the university along with teaching and research. The university is expected to address the national and social problems giving direction to the society. University cannot remain aloof from the larger society but should always be engaged in the country’s development. By and large it should respond to the needs of the society, industry and commerce. The planners and policy makers should decide the role of university and should frame the curriculum according to the needs of the community and the demands of international markets. University should aim to develop a universal man, a universal society and to achieve these aims, university should come forward to change and reform the society.

University is a temple of learning and should teach universal truths. It has to cater to the needs of the universe. Most universities should be residential universities where teachers and students interact more often to produce some good work, a place where a team of sincere and dedicated workers work together. University should have a campus life for long hours
where discipline is understood as self-discipline and where there is maximum utilization of the infrastructure. Values like humanity, love, compassion and kindness ought to be inculcated in the students. These academicians expected higher education to be only for those who have love for it. One intellectual voiced that the Universities should be closed for coming ten years and university teachers should teach at the primary and secondary levels, which will help in upgrading the faculty of the school.

University should develop human resource and provide trained personnel to the industries. Its aim is to develop a holistic personality. University structure and functions need to change simultaneously along with the technological and scientific changes. University has to educate people for a better quality of life. Every course of study in the university should be directly related to the society and concerned with the social issues. University research should be devoted to different social problems. The university should reflect the culture of the country and must always be ready to assimilate the culture of the other countries. It should provide opportunity to both students and teachers to connect to the global world.

**Idea of a University: Perspective of 14 Academicians exposed to various Indian and foreign Universities**

These academicians viewed university as a unique place for sharing and experimentation of ideas, a place where intellectual minds get together and where there is inter-generational exchange of ideas. It is a storehouse of knowledge, place for academic pursuits and a platform for exchange of ideas on a universal plane. University is expected to show a new light to the society.

Generation, preservation and transmission of knowledge have been considered to be important functions of a university. Generating knowledge is research and preserving knowledge is its documentation and passing the same to the students. It should generate new knowledge and apply existing knowledge for the benefit of the society. It should be considered as a platform where people toy with various ideas, explore various possibilities and come out with creative solutions. University education should aim to train people in thinking and in basic research that which is excellent and original. University is not meant for the masses but should admit only those who really want to gain higher education. University has to produce leaders who can lead the country with adequate ethics and values.
University has been idealized as a place with autonomy, freedom of choice, complete decentralization and cross-fertilization of ideas taking place at high rate. It is a nucleus to which everything else is attached, whether an idea, philosophy, ideology, everything should germinate in a university from where it is tested, verified and validated. University ought to have ideally flexible structure where democratic aspirations of the people of the nation should be expressed. It should have larger departmental autonomy, minimum structuring, maximum flexibility and a lot of interdisciplinary and inter-departmental collaborations. There is a need for a cafeteria approach.

University should aim for academic excellence. Universities have to address to a wider cause and thus bring change in the larger society to bring social transformation. It should become a center for socially relevant projects, interventions and create immense emphatic environment for social life. Ideal university is a place where brilliant minds are engaged in teaching young energetic minds who are keen to learn from this interaction. The aim is to generate a super class of students who are internationally acceptable and excel wherever they go and come up with wonderful work when given opportunity. The university life should be intensely vibrant with different academic colors. The relationship between teacher and taught should be idealistic and exemplary where each and every teacher is easily approachable.

According to the idea of these academicians, the University institution can be considered as a lighthouse for the community. It is the responsibility of the university to observe whether the society is treading towards a desirable goal. It should have a vision and a mission, which can transform individual’s potentials into leadership, create harmony and instill the community with the power so that it becomes capable of solving its problems. Every course of study in the university must have a direct relation with the issues of the society and should be able to give concrete solutions to the social problems.

The academicians’ vision of university portrays it as a completely autonomous institution whereby it is free to do what it wants to do, has the ability to generate its own resources government or non-government and pursues excellence in knowledge. The intellectuals have emphasized on the development of entrepreneurship in the students. They have realized the importance to develop skills and attitude in the students. Education plus is what is required. The idea is that university should make the student fit for a useful role in
society and provide an impetus for social transmission. Development of high employability will help the nation to acquire wealth and make a man successful in life. Academicians strongly felt that self-reliance and self-renewal are the two important factors on which the higher education and Universities in the 21st century need to emphasize on. Liberal education is the soul of higher learning. University is also expected to open new horizons of learning and must move beyond traditional limits and styles.

Discussion, Comparison and Generalization

Discussion

The academicians having exposure of only a single university have given the idea of a university basically in terms of what they expect from this institution. Like Jaspers these academicians have regarded the linkage between teaching and research as fundamental to the idea of the university. These twin pillars of the academy — teaching and research — would be guided by philosophy, which Jaspers believed was the guardian of the idea of the university. For Jaspers, research and teaching seek to contribute to intellectual culture as a way in which truth becomes meaningful and manifest.¹⁰

No doubt the academicians voiced teaching and research to be the main function of university, but what constitutes university teaching and how is it different from a school teaching, how teaching and research are interrelated and move side by side in the academia, has not been talked about by the intellectuals. Like Jaspers believed that the university fulfills its tasks—research, instruction, training, and communication—within an institutional framework. It requires buildings, materials, books and institutes and their orderly administration. Privileges and duties must be distributed among its members. So for him the university represents an independent corporate whole with its own constitution and dedicated to the pursuit of science and scholarship. But the sampled academicians have not given any such deep thought regarding the two main functions of the university.

The academicians in this sample group have considered university to be a place for the overall development of the personality of the students. The academicians have strongly felt that there is an interaction between university and industry and university and community. University has to produce professional people fit for the market and industry. They also

emphasized specialization in higher education. A.N. Whitehead was of the view that the way in which a university should function in the preparation of students for challenging career, such as modern business, engineering etc, is by promoting an imaginative blend of the various disciplines underlying that career.\textsuperscript{11}

Extension has been considered to be another important function of the university but what kind of extension and consultancy services can be provided by the university teachers and what will be its modus operandi and dynamics, has not been thought of by the academicians. Because of poor level of professionalism in academicians, they have also not been able to differentiate between the aims of education in general and aim of a university. It seems that they have anticipated the functions of a university in terms of their aspirations but they somewhat lack the power of imagination where by they could have put forward some creative ideas regarding the different aspects related to their expectations.

How the universities can be a partner in the overall national and economic development of the country could not be imagined by the academicians. The academicians could not see even the existing functions in a new light. They have exhibited poor receptivity to the new experiments in higher education. The academicians have not stated any new expectations and idea of a university system in a broader perspective.

Academicians having exposure of various universities in India considered the main function of university education to improve the quality of life so that the individuals can largely connect to the global world. They have emphasized the aim of university and higher education to develop higher order thinking skills in individuals. J.L.Nehru considered university as an institution, which stands for the onward march of the human race towards even higher objectives. Academicians too like Nehru idealize university as a place for creating, modifying, replacing and refining knowledge and to build up new theories. Importance was given on inculcating universal values in the students. The academicians expected a university teacher to perform five important functions - teaching, research, dissemination, reference and extension work.

The impact of exposure of this category of academicians to various Indian universities can be felt to some extent in their expectations and imaginary ideas about a university system. Although they have fantasized a university without walls and talked about globalizing the

university education so that higher education can be connected to the larger world, still their ideas are not lighted up with imagination. Their expectations and ideas are very descriptive rather than being creative and visionary.

Moreover, as they talked about university reflecting the culture of the country and linking higher education more with the society and social issues, the hypothesis that their idea of university will be grounded in the soil of indigenous socio-cultural background, seems accepted.

Expectations vibrant with great ideas, vision, fantasy and imagination definitely were put forth by the academicians exposed to numerous Indian and foreign universities. This exposure enabled these intellectuals to construct an intellectual vision of a new university. They could visualize to some extent a proper background behind the establishment of new universities. The academicians belonging to this category of sample seem to be well read, receptive and well aware of the new and different developments in the field of higher education not only in India but also in many countries abroad.

Any idea, philosophy, ideology which takes birth anywhere can be tested, verified and validated in the university. An intellectual emphasized the importance of a cafeteria approach where there can be a lot of interdisciplinary and inter-departmental collaborations. They visualized a University system with larger departmental autonomy and flexibility and minimum structuring. They have voiced that universities are the chief agencies for the fusion of progressive activities in the society into an effective instrument of progress. Of course they are not the only agencies, but it is a fact that today the progressive nations are those in which universities flourish.

Some senior academicians emphasized on the privatization of higher education, whereby the universities should find ways to generate its own resources. Gandhi, who strongly believed that university, at the majestic top could only be sustained if there is a sound foundation, expressed some similar view. To him, higher education should be left to private enterprise for meeting national requirements whether in the various industries, technical arts, or fine arts. The programme of higher education should be linked with the
national needs of rural uplift with a view to promote education conducive to the grass-root levels of the society. 12

They have fantasized university of the 21\textsuperscript{st} century as self-reliant and self-renewed. It has been considered important for the university and higher education to move beyond traditional culture and limits and set up new horizons and to open new vistas of knowledge. Gandhi too wanted to reorganize university education in the country on altogether new pattern. Although the sample academicians have talked of providing specialization and increasing professionalism in university courses but at the same time they have emphasized the undue importance of liberal education. Developing entrepreneurship in the students is a new idea voiced by the intellectuals, which were not thought about by the other two categories of academicians. Mahatma Gandhi also strongly felt that the universities should be vocationally reoriented in order that youths may have economic independence after having university education. Moreover the academicians exposed to universities abroad have definitely talked of international standards and rankings, which was lacking in the expectations of other academicians.

**Comparison and Generalization**

As stated earlier the history of Indian university is not old. There is still Colonial hangover as the universities in India were established during British rule. The thinking of the Indian academia is still heavily dominated by the same British thinking on which the university was established. The intellectuals, in this study conducted in North Indian setting, very sparingly have exhibited lateral thinking as far as expectations from a university institution is concerned.

It is felt that the academicians of the Indian universities, especially those sampled in this study, are predominantly the practitioners and professionals of their own areas of specialization and that they rarely attempted to philosophize the idea of university. The academicians appear to be more concerned about their own discipline. The academicians still have the age-old stereotypical vision of a university. It seems that the academicians are working more as a technocrat or a professional in an industry and are engaged in the process

of production as a productive unit but the predicament is that they are not in a habit of professionalizing their ideas regarding higher education and lacked clear professional vision about Higher Education. Their expectations and ideas are very descriptive and not creative, visionary and reflective.

The level of realization of sampled academicians has not been able to reach that level of abstractness and metaphysical reality, which has been achieved by the academicians belonging to universities in Europe and USA. For example for Newman the goal of university is not a patent or professional competence but "a habit of mind . . . which lasts through life." This habit of mind is embodied by the faculty, supported by the administration, and acquired by the students. Such an idea has yet not been inculcated and thought about by the present sample of academicians for whom university is simply an institution for higher learning where students get degrees and become eligible for job outside. The concept of habit of mind and the process for developing the same does not appear to be a food for thought for many of the sampled Indian academicians.

The academicians have also firmly believed that the major function of a university should be to produce skilled professionals and leaders in different fields. This expectation is very unlike the idea of Newman who believed that the university is not limited to the training of professional men. In India, university education has still to work literally hard and focus on developing consciousness in its students, which Newman had emphasized long before.

The academicians and intellectuals in India till now have not been able to accept the fact that university should be dedicated to pursue knowledge for its own sake. They have considered university to be an institution that is accountable to the public, as it has been established by the society for its own benefit and transformation. Whereas, Newman firmly believed that it was necessary to separate the search of knowledge from the cares of mankind. A university, he believed, should be dedicated to the pursuit of knowledge for its own sake. He visualized it to be “the high protecting power of all knowledge and science, of fact and principle, of inquiry and discovery, of experiment and speculation.” He considered universities to be ivory towers, far separated from the cares and influence of society, where scholars could indulge in the pursuit of knowledge; in whatever area they chose, without being accountable to anyone.
Majority of the Indian academicians interviewed have emphasized that University should have a close relation with the community and society so that it can ultimately contribute to social change and should be accountable to the public cause. Whereas, Newman voiced that universities should build up individuality and variety within a climate of tolerance. He believed that universities are neither community service station, passively responding to popular demands and thereby endangering its intellectual integrity nor is it as an ivory tower into which students and teachers can withdraw for teaching and research accepting no responsibility for the improvement of the society. Rather it has to maintain an ambivalent position between the two. Such a clear differentiation is lacking in the expectations of the Indian academicians.

Some have very forcefully emphasized on university being a completely public institution meant to serve the public cause, while others have emphasized that university should purely indulge in basic, fundamental and applied researches. Few academicians in this study have tried to give any mature statement regarding the balance between these two dimensions of a university institution. Majority of the sampled academicians failed to reach that level of idealization whereby they could visualize university as being constantly in a state of creative tension knowing where to interpret, where to criticize, where to pioneer and where to support traditional values.

There is a point however, where the vision of Newman and that of Indian academicians about a university institution can be stated to be standing on a same platform. Just like the Newman’s vision of a university was in accordance with the traditional belief that university had the freedom of thought and action, which was based on the maxim that there should be no hindrance to the search of truth, similarly the Indian academicians’ idea of university have been in accordance with the traditional belief that has formed the basis of our Indian universities since Colonial times.

As far as the university education is concerned A. N. Whitehead gave much importance to the relationship between teacher and student. He believed that university ought primarily to be regarded as the arena in which there is to occur the electric contact between teacher and pupil. As compared to this spiritual idea, the Indian intellectuals have not given any deep thought on how to improve the contact and relation between the teachers and taught as envisioned by Whitehead, so that new and unique ideas are generated. To our great
misfortune, the Indian students themselves do not always know what universities are for. For them it is merely an institution to prepare people for examinations. The unfortunate part is that the academicians themselves have failed to convey the idea to the students that university is beyond educational and vocational orientation. It is not just an institute to prepare for examination and profession in life but it is an institute to prepare an individual for a complete life.

Comparison of Nehru and Gandhi’s idea of university with that of the present academicians was also done. The great modern Indian visionary Jawaharlal Nehru considered universities to be institutions, which lay stress on those standards of thoughts and action, which make an individual and a nation. He emphasized on developing values like tolerance, humanism, reasoning, scientific temper, adventuring for ideas and searching for the truth as the main goal of university education. Indian University Commission, 1948-50 gave much importance to Nehru’s idea of university. But unfortunately not many of the academicians in India have given any such importance on inculcating these values or rather what should be the modus operandi for imbibing these values in our youths through the content of higher education being provided in our universities.

Gandhi visualized such education by which the youth may feel proud to fight for the cause of his or her motherland, the nation. He wanted professionally oriented education so that the youth could earn while he learns. The academicians have undoubtedly voiced their expectations related to developing professionalism in the youth and starting more vocationally oriented courses but what should be the picture like or really how and which course would be ultimately related to the overall national and economic development of the country have not been idealized and thought upon by the academicians. Their expectations actually lack the depth, the concern, care and the feel, which was so very deep rooted in the vision of our great thinkers.

Higher education in ancient India was regarded as a source of illumination, giving a correct lead in the various spheres of life. In its wider sense education was regarded as self-culture and self-improvement and a process which goes on till the end of one’s life. In its narrow sense, ancient thinkers regarded education as the instruction and training, which a youth receives during his student hood before he settles down to his career and profession.

13 J.L. Nehru (1947), Convocation Address, Allahabad University, Allahabad.
Whereas in the modern times, as voiced by the academicians in the sample, the wider sense of education is to develop professionalism in the students and in its narrow sense, education means to earn a degree which will ultimately help the student to get a job. Education was never regarded as a mere bread and butter preposition; in fact persons entertaining such a view were condemned in Ancient India. Higher education was meant to promote material as well as spiritual welfare, both in this and in after life. The ancient thinkers had such a high perception of higher education that they expected the education to strengthen the moral nature and enable one to stand the severest temptations of life. Unlike today, it was not the allurement of the degrees or the prizes but the thirst of knowledge or the desire to preserve the national heritage and culture, which was the main aim of all the educational effort and activity.

The function of education in ancient India was to remove prejudice and make the student more reasonable and considerate by enabling him to understand viewpoints different from one’s own. The education of today, as stated by the academicians, is more urgently required to help the individual to adjust in the global world rather than helping and enabling the youth to inculcate the value of tolerance and empathy by which he or she can understand others, which will ultimately bring more peace in this era of globalization.

The Ancient Indian education was able to develop character and personality, inculcate civic virtues and turn citizens well qualified to follow their professions and discharge their duties in life. It was not only able to preserve the heritage of the past but also to enrich it from generation to generation. It produced a galaxy of able scholars and thinkers. It enabled India to achieve high material prosperity by the excellent arrangements it made for training young men in arts, crafts and professions. A real university atmosphere prevailed in the centers of education during that time which is intensely lacking in most of the Indian universities today. Nowadays, very rarely a true university culture can be seen in some of the Indian universities. The academicians interviewed simply ignored the ways and steps to develop such a culture.

The Convocation ceremony was given so much importance in ancient India, which has not been talked about by any academician. The Convocation was important, because it was the time when the Chancellor particularly exhorted the student not to neglect his/her duty of daily revision.
Looking at these ideals, it can be said that the main aim of modern Indian education to pass the examinations with high honors, was practically non-existent in ancient India. It was not the allurement of the degrees or the prizes but the thirst of knowledge or the desire to preserve the national heritage, which was the main spring of the educational effort and activity. As compared to most of the modern scholar, the scholar in ancient India could not take shelter behind the buttress of a degree. Rather he had to keep his scholarship fresh and up-to-date for he could be challenged at any moment by the society, which used to judge his merit by the way in which he acquitted himself in such discussions. Such in depth sincerity about the acquisition of knowledge and the preservation of national culture and heritage unfortunately could not be felt in the expectations of the academicians.

It thus, seems clear that since Indian universities do not have a long history and since higher education has not yet developed into an independent discipline, the Indian academicians and intellectuals’ idea of a university is not that mature as the ideas opined by great thinkers of the West, where they have a long experience of Western universities, almost 853 long years (since Bologna). The ideas also very rarely match with the ideas of the great ancient Indian thinkers. The sampled academicians have still not been able to form a philosophy of higher education. Higher education needs to be established as a separate discipline and a higher education culture has to be developed in the present universities so that the idea of the academicians professionalize as far as the concept of higher education is concerned. But then whatever ideas the academicians have put forward, either by those exposed only to a single university or by those exposed to variety of Indian and foreign universities, are definitely rooted in the Indian soil.

Conclusion

The findings of the present research give rise to the following conclusion in terms of the three main research hypothesis framed earlier.

It was found that the academicians’ idea of university was mostly confined to their own or single university (of their own). The idea was quite narrow and mostly restricted to the infrastructure aspects and the traditional functions of the university viz, teaching and research and to some extent student support. Thus the hypothesis that the academicians
specially belonging to the North Indian universities will reflect a limited vision and idea as far as the university institution is concerned, stands proved.

The second group of sampled academicians was of those academicians who have studied or worked in several universities in India and thus are exposed to various types of academic cultures and environments of higher education. They have mostly given their ideas embedded in the Indian socio-cultural perspective. They have talked of developing curriculum based on national objectives and national goals. Thus, the second research hypothesis that the idea of university of this group of academicians will be grounded in the soil of indigenous socio-cultural background has been accepted.

The last category of academicians was those who are exposed to the universities and higher education institutions of various countries. They have somewhat put forward varied and creative ideas regarding different aspects of university. For example, they have talked about university without walls, higher education for all, both for the elite and the masses, developing professionalism and entrepreneurship in the students. But still, as has been discussed in detail under the heading of comparison and generalization, the ideas of these academicians lack professionalism and a true and in depth philosophy of higher education. Their ideas have not been that creative and visionary like the ideas of our great ancient thinkers and Western academicians. Thus, the third and the last research hypothesis that such widely exposed, traveled and experienced academicians will express quite versatile, creative, broad based and modern idea of a university institution stands partially accepted.

This exploratory study, in general, thus led to the acceptance of the hypothesis that the exposure of academicians to various higher education institutions enriches his/her idea of a university.

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http://www.eslincanada.com/ideas.html

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EFFECTIVENESS OF MULTIMEDIA INSTRUCTIONAL PACKAGE FOR TEACHING MARKETING MANAGEMENT AMONG HIGHER SECONDARY SCHOOL STUDENTS

Dr. ROSA M.C.14

PREETHI C15

Abstract

The present study is an attempt to find out the effectiveness of Multimedia instructional package over the present method of teaching on the achievement of marketing management among higher secondary school students. Multimedia in education is a format for presenting information using a combination of images, sound, audio and text. Multimedia activities encourage students to work in groups, express their knowledge in multiple ways, solve problems, revise their own work, and construct knowledge. Multimedia package will be helpful to increase student’s retention, develop various skills and promote students self esteem and developing high level thinking. In the classroom multimedia can bridge the gap between theory and practice by giving students the opportunity to practice what they have learned in safe and controlled environment. School technology curricula include multi-media presentations as a required skill for students. The sample consisted of 90 higher secondary commerce students. Analysis of the data revealed that students taught through Multimedia instructional package performed better than those who were taught through present method of teaching.

Introduction

Marketing is an essential survival tool in today’s competitive business environment. Marketing impacts upon almost everything we see and do in today’s world. Marketing gives the opportunity to take up an exciting career requiring talent and creativity. Trade, commerce and industry constitute a vital part of our life’s activities. These aspects of our life’s experiences are extremely important and if we despise these, all our educational effort will be fruitless toils. The increasing complexity of business and commerce organisation in the present day world would make it obligatory for students to be conversant with modern principles and practices of management and marketing. The use of computers and the

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15 Research Scholar, School of Pedagogical Sciences, Kannur University.
management technique of behavioural science have completely revolutionized the running of modern business and commercial enterprises. It therefore, has become very necessary to pay adequate attention to commerce education. The individual must be able to earn a living for dealing a civilized life. In such perspective commerce education is to be looked upon as just one phase of education. Marketing occupies an important place in the commerce subjects. It has opened worldwide chances for employment. That is why marketing has been described as a window on the rapid progress of technology and scientific knowledge that is constantly taking place in the world.

During the first 10 years of schooling students are not given formal instruction in commerce and marketing subjects. Against this background, it become necessary that at this stage instruction in these two aspects be given in such a manner that students have a good understanding of the principles and practices bearing on business, trade and industry and their relationship to society, world as a part of the economic, legal and social environment. This will enable them to understand and appreciate the functions and scope of marketing activities in the economic set up.

This millennium is characterised not only by population explosion but also by galloping advancement of science and technology. Information technology is progressively invading each and every area of modern civilisation. Integration of information and communication technology is essential to meet challenges of the new decade.

In the present scientific and technological age the conventional method was not sufficient to arouse interest among the students and does not needs up to the intellectual, psychological and emotional needs of the students in the new millennium (Kala 2007). The method of teaching marketing needs to change. The traditional method of teaching is based on giving information as bits. It includes rote memorization of concepts facts and principles, which do not realize objective of marketing teaching. Teaching strategies play an important role in enhancing the learning abilities of the students. It has to be lamented however that instruction in the higher secondary classroom continues to be dominated by teachers talk, minimum student participation and teacher control as is evidenced by a number of research studies. New interesting and innovative methods should be followed for effective teaching.

Multimedia can be used to develop active and mastery learning. In this learning situation, there is active participation on the part of the learner as opposed to passive learning listening to lectures and demonstrations. It also can stimulate the students mind and encourage learning through all sense because multimedia can combine so many media
together. Furthermore, multimedia is nonlinear and interactive in nature. The interactive nature is considered to be the most important feature.

Multimedia holds greater promise in enhancing learning as well as in improving the quality of education. Multimedia enables students get a live vision of life’s aspect and scientific factors (Lu 2008). Any diagram can be explained in detail with 3D effect. It helps the student to understand the lesson clearly. Multimedia ensures flexible learning. Flexibility is recognised in the level of access to courses, the place of entry to, exit from course, the place, time and place of study; the form and pattern of interaction among learners, teachers and resources, the type and variety of resources to support study and communication; the goal or outcome of the educating process and the method used to measure achievements and success.

Learning through multimedia is an active and engaged process, store, retrieves and transmits audio, video, graphics and textual information. These kinds of systems can have a powerful impact on the learner’s problem solving abilities and can generate a positive effect (Maine 2009). The interactive multimedia enhances effective self learning among students. Individual differ widely in their cognitive experiences, psychological skills, success and failure in learning, interest and perception. It can be said that no two learners are alike physically, mentally or intellectually. Since learners differ in their prior learning experiences, and in what they need to learn. Learners should be allowed to learn independently at their own pace and according to their interest and abilities.

The effectiveness of classroom teaching always depends upon the variety of the methods adopted by the teacher. The teacher should be able to use permutations and combinations of various methods, devices and techniques to make the lesson more effective. This study tries to investigate the effectiveness of multimedia instructional package in the teaching of marketing at higher secondary level.

Knowledge of marketing is more effective and enduring when it is obtained through personal observation and individual effort rather than learnt from books or listened from someone (Saint 2010). The present study is an attempt for developing a multimedia instructional package for teaching marketing at higher secondary level. It is hoped that the findings of the study could be utilised in all educational settings where achievement of the students is given more importance.

Key Words:
Multimedia: - Integrated use of the different instructional media includes film, slides, computer, tape and live face-to-face contact between teacher and student.

Instructional Package: It is a set of strategies used in the instructional process so as to make teaching learning process more easy and simple.

Objectives of the study
1. To prepare a multimedia instructional package in marketing management.
2. To find out the effectiveness of multimedia instructional package prepared in teaching of marketing management at higher secondary level.
3. To find out the effectiveness of multimedia instructional package over existing method of the achievement of marketing management of higher secondary level.

Hypothesis
1. There will be significant difference between multimedia instructional package over existing method of teaching.

Methodology
The study was carried out on a sample of 90 higher secondary school students of Palakkad district. Students of two divisions of standard XII were selected one as experimental group and other as control group. Control group consists of 45 students and experimental group consists of 45 students.

Tools
Experimental method was used to conduct the study. Multimedia Instructional Package and Achievement test in Marketing management were used as tools for the study.

Statistical techniques used
The study was aimed to determine the effectiveness of multimedia Instructional strategy for the acquisition of marketing management, it was necessary to compare the outcome of the study with that of the existing method of teaching carried out in the control group. It was important to find out whether there was any significant difference between the two. Test of
significance of difference between means and ANCOVA were calculated for statistical analysis.

ANALYSIS AND INTERPRETATION

Before Experiment

Table 1
Comparison of pre-test score of pupils in the Experimental and Control groups

<table>
<thead>
<tr>
<th>Group</th>
<th>No. Of Pupils</th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>45</td>
<td>7.277</td>
<td>2.67</td>
<td>0.86</td>
</tr>
<tr>
<td>group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control group</td>
<td>45</td>
<td>7.78</td>
<td>2.71</td>
<td></td>
</tr>
</tbody>
</table>

From the table it is clear that the calculated t-value (0.86) is less the table value (2). So it is not significant at 0.05 levels. This shows that there is no significant difference between the means of the pre-test scores of pupils in the experimental and control groups. Therefore the two groups do not differ in their initial performance. The two groups were more or less of the same ability before the experiment.

Graphical representation of the pre-test score of pupils in the experimental and control groups

![Graphical representation of the pre-test score of pupils in the experimental and control groups](image-url)
After experiment

Table 2

Comparison of post-test score of pupils in the experimental and control group

<table>
<thead>
<tr>
<th>Group</th>
<th>No. Of Pupils</th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>45</td>
<td>16.45</td>
<td>2.98</td>
<td>7.64</td>
</tr>
<tr>
<td>Control group</td>
<td>45</td>
<td>11.64</td>
<td>2.77</td>
<td></td>
</tr>
</tbody>
</table>

From the table it is clear that the t-value obtained (7.64) is greater than the table value (2). It is significant at 0.05 levels. This shows that there is a significant difference between the means of the post-test score of pupils in the experimental and control groups. Therefore the two groups differ in their performance. So it can be concluded that the multimedia instructional strategy has greater effectiveness than the present method.

Graphical representation of post-test score of pupils in the experimental and control groups

Comparison of gain score of pupils in the experimental and control groups.
Gain scores were obtained by calculating difference in the post test and pre-test scores of each student in the two groups. The gain scores were tabulated and then the mean and standard deviation were calculated. The difference between two mean scores was found out and tested for significance. The result obtained is given in table 3

**Table 3. Data and results of Test of significance of the Gain scores of Pupils in the Experimental and Control groups.**

<table>
<thead>
<tr>
<th>Group</th>
<th>No. Of Pupils</th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>45</td>
<td>9.39</td>
<td>2.5</td>
<td>9.99</td>
</tr>
<tr>
<td>Control group</td>
<td>45</td>
<td>4.10</td>
<td>2.8</td>
<td></td>
</tr>
</tbody>
</table>

The critical ratio obtained is 9.99 which are greater than the table value (2). So it is significant at 0.05 levels. This shows that there is a significant difference between the mean gain score of the two groups. Since the mean gain scores are higher for the Experimental groups, it can be concluded that multimedia instructional package is more effective in teaching marketing management.

**Graphical representation of gain scores of pupils in the experimental and control groups.**

**Interpretation using Analysis of Covariance (ANCOVA)**

Analysis of Co-variance is a statistical technique used to control or adjust for the effect of one or more uncontrolled variables and permit there by a valued evaluation of the outcomes of the experiment. Analysis of covariance was the statistical technique adopted by the investigator for arriving at valid and reliable conclusion. The analysis was done to
compare the effectiveness of Multimedia Instructional strategy for the acquisition of marketing management over the existing method of teaching.

**Comparison of effectiveness of Multimedia Instructional Strategy over the present method of teaching.**

The scores of 90 pupils of the experimental and control group were subjected to Analysis of Co-variance to determine the effectiveness of multimedia instructional package over the present method of teaching. The total sum of squares, mean square variance and F ratio for the pre-test and post test scores of the experimental and control group were computed. The data are presented in table 4.

**Table 4 Analysis of variance of the Pre-test and Post test scores of the Experimental and Control groups.**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>SSx</th>
<th>SSy</th>
<th>MSx (Vx)</th>
<th>MSy(Vy)</th>
<th>Fx</th>
<th>Fy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among Means</td>
<td>1</td>
<td>1.96</td>
<td>61.83</td>
<td>0.74</td>
<td>62.3</td>
<td>0.09</td>
<td></td>
</tr>
<tr>
<td>Within groups</td>
<td>88</td>
<td>492</td>
<td>512.5</td>
<td>10.26</td>
<td>9.12</td>
<td>7.92</td>
<td></td>
</tr>
</tbody>
</table>

The calculated Fx value (0.09) is less than the table value (3.95) at 0.05 level. Hence there is no significant difference in the pre-test scores among the two groups. The calculated Fy value (7.92) is greater than the table value (3.95) at 0.05 level. Hence there exists a significant difference in the post test scores of the two groups.

**The Analysis of Co Variance of the scores of the pre-test and post test of the experimental and control groups were computed. The data are presented in table 5.**

**Table 5. Analysis of Co Variance of the scores of the pre-test and post test of the experimental and control groups.**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>SSx</th>
<th>SSy</th>
<th>SSxy</th>
<th>SSyx</th>
<th>MSyx</th>
<th>MSxy</th>
<th>SDxy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among means</td>
<td>1</td>
<td>1.96</td>
<td>61.83</td>
<td>7.01</td>
<td>59.81</td>
<td>58.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within groups</td>
<td>87</td>
<td>492</td>
<td>512.5</td>
<td>508.64</td>
<td>66.84</td>
<td>2.04</td>
<td>1.26</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>493.96</td>
<td>574.8</td>
<td>515.65</td>
<td>126.65</td>
<td>61.86</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fyx = 58.71 = 46.59
The calculated Fyx value (46.59) is greater than the table value (3.95) at 0.05 levels. Hence there exists a significant difference between the scores of two groups.

**Comparison of adjusted ‘Y ‘mean score**

The adjusted mean for the post test score of students in the experimental and control groups were calculated. The data are given in the table 6.

**Table 6. Adjusted means of scores for the post test of students in the experimental and control groups.**

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mx</th>
<th>My</th>
<th>My adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>42</td>
<td>7.12</td>
<td>11.78</td>
<td>12.42</td>
</tr>
<tr>
<td>Experimental group</td>
<td>44</td>
<td>7.95</td>
<td>15.98</td>
<td>17.01</td>
</tr>
<tr>
<td>General mean</td>
<td></td>
<td>7.77</td>
<td>14.28</td>
<td>14.84</td>
</tr>
</tbody>
</table>

SED among two adjusted means =0.61

$$t = \frac{17.01-12.42}{0.61}=7.524$$

The adjusted mean of experimental group (17.01) greater than the mean of control group (12.42). It means that the experimental group differs significantly in their achievement. That is experimental group is superior to the control group in their performance in their post test. The adjusted means for the post-test scores were tested for significance. The t-value obtained was 7.524 and the table value at 0.05 level is 2. Hence the obtained t-value is significant. This indicates that there is significant difference between the experimental group and control group in the achievement. So it can be concluded that the students taught through Multimedia instructional package performed better than those who were taught through present method of teaching.

**CONCLUSION**

From the findings of the study it was explicitly proved the effectiveness of Multimedia Instructional Package for the acquisition of Marketing management. Multimedia enables learning through exploration, discovery and experience. That role belong to the learning needs of students with multimedia, the process of learning can become more goal oriented, more participatory, flexible in time and space, un affected by distances and tailored to individual learning styles and increase collaboration between teachers and students.
Multimedia enables learning to become fun and friendly, without out fear of inadequacies or failure.

**Suggestions**

- As Multimedia instructional package is an effective visual strategy it can be tried with children with learning disabilities like dyslexia etc.
- A survey of attitude of teachers and students towards the effectiveness of this package can be conducted.
- The study can be conducted using other variables like level of adjustment.
- The study can be conducted in other discipline too.

**References**


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Pre-service teacher education program: Possibilities of Quality Improvement

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Quality of school education needs much to be improved. Although, teacher is not the only element get one of the important one. The performance of teachers in the school does depend upon the pre-service teacher education program, but the situation in the schools are quite challenging for them to cope with. We need to consider both situations in the school as also limitation of pre-service teacher education program in general.

The situation in school has a very wide spectrum, if we limit ourselves to state-run schools-which are majority of schools. We have a large number of them with unfavorable student-teacher ratios. The facilities available to teachers now go little beyond black-board and some equipment for demonstrations. Changes have happened as a result of nationwide education programs like DPEP or Serve Shiksha Abhiyan (SSA). There may also be samples of science and math’s kits as a consequence of follow-up of Kothari Commission, 1966. There may also be some learning material as a follow up of in-service teacher education program under SSA or operation Black-Board- learning without burden.

The work load of teachers who are mostly preoccupied without any time for reflection or creative innovations. Yet teacher are making good of difficult working conditions. They mostly accept the criticism that the poor quality of school education is because of teachers. They are not articulate usually to point to flows in changing education policy, lack of facilities and time for innovation.

The policies in curricular changes which have been happening once on every alternate decade are with inadequate critique of earlier policies or reason for reversing them. The changes in text books are not connected to school practices or situations. The education policy has been shifting emphasis on one or other aspect of education. There is mostly not much of linking thread among various education programs.

As a result teachers may be expected to focus sometimes on retention of children or at others on at activity or evaluation. These changes in focus may be for causes emanating more because of administrative than educational purposes.
The pre-service program for teachers is a poor match to the challenges of school situations. A general pre-service program is a situation of heterogeneity. Student teachers often having graduated are to be grounded in foundation and methodology of content areas. The program is mostly a quick short period one. In general, it is as short as nine months. The teachers as also students are from very different itinerary. Resulting in heterogeneity to be both among students and teachers. The demands and logistics of the program are such that in-group or intra-group interactions are not much. There are many conflicting demands. The practical makes faculty and students to run through the program with the hope to emerge as successful professionals.

One issue which may surface due to conflicting needs is content versus methodology. Is understanding of content enough? Can methodology precede independent of content? Where is the space in the program for revisiting the content? If the qualifying long period program could not take care of the content, how the short teacher education program aspire to do it.

The Qualitative vs. Quantitative debate. This emerges both in situations of comprehension as also evaluation. There can be camps which emphasize one to the exclusion of the others. Others may look at quantitative to be scale, superimposed on the qualitative. Problems arise when those areas are selected which can be quantified.

What are the possibilities of quality of teachers emerging out of this situation. The pre-service teacher program is not viewed as a beginning of further curiosities to be followed during the career as teacher but more of a turning point followed by continuities. Thus the program is rarely viewed as making appreciable qualitative changes. One trap into which teachers fall is to consider teacher education programme to be far away from realities of school and therefore the norms and patterns school prevail. New teacher is mostly chided by senior teachers to rather forget most of what is taught during the training programme as not applicable or difficult to be applied. In fact this mostly begins during the school experience program itself. As a result in most of situations teacher education program end up as not making a desirable qualitative change in schools. The new learning techniques, attitudes which a new teacher can bring to the school is either missing withers away soon in years if not months. This is also reflected in the in service programme where teachers complain mostly of in applicability of tools and techniques they might have cherished during the pre-service program.

Teacher education program being of short duration have another trait. They lack accumulation in the institution, as a result the new group has mostly nothing to learn from
their predecessors. This is despite new technologies and equipment now being relatively available in educational institutions. Some recent longer duration programme also fail to attend to quality of both the academic and pedagogical issues.

The possibilities are not that desperately difficult. The heterogeneity of student teachers as also faculty with regard to academic content pursued historically as referred to above can be used beneficially by learning from each other. This need not be as teaching the content as such but sharing the strengths, recent turning points in their discipline, change of research paradigms. The same can possibly happen among teacher educators. This should take benefit of the heterogeneity of both the groups. This should also inform necessary changes with regard to content methods, styles or learning material.

But the changes need to be more far reaching to make a qualitative dent. Another option is to go in for teaching education programme of greater durations to attend to integration of content and methodology. The other is to focus on a cluster of disciplines in any case a accumulation of learning material and practices. As also changes which are called for due to paradigm shifts originating in disciplines or pedagogy need to be recorded cumulatively. To cite few examples the place of experiments in sciences has long been recognized as moving away from verification to refutability, social sciences as epistemologically placed differently than natural sciences, languages giving greater significance to use of language instead of grammar.

To conclude the challenges for teachers in schools are many and varied, and in absence of resources time and encouraging groups it is unfair to expect them to overcome the problems and deliver the qualitative results. Teachers alone can’t do this or be blamed for this lack of collaterals. Teacher education programme need to be with longer period and vertically integrated. The heterogeneity need to be deployed as complementarily or there should be focus group programme.

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Academic Achievement Motivation of Adolescent in relation to their Socio-Emotional School Environment

Dr. Sarfaraz Ahmad\textsuperscript{16}
Prof. Ansar Ahmad\textsuperscript{17}

\textbf{ABSTRACT}

Socio-emotional school environment is studied with the help of interaction, love, compassion, respect, honor, courtesy and sympathy. Socio-emotional school environment may have an impact on academic achievement motivation of adolescents and can also form the basis of the adolescents’ education and vocational success. The present study concentrates on academic achievement motivation of adolescents in relation to their socio-emotional school environment. The results reveal that all r-values are more than 0.05 level. Results show that there is a significant relation between academic achievement motivation and socio-emotional school environment of adolescent. It may be concluded that the socio-emotional school environment is a deciding factor in the academic achievement motivation of adolescents.

\textbf{Key words:} - Academic Achievement Motivation, Socio-Emotional School Environment and Adolescent.

“\textit{Motivation is an energy change within the person characterized by effective arousal and anticipatory goal relation.}”
F.G.McDonald

Motivation is psychological word, derived from the word “Motive”. The meaning of motive is to awaken the power of desire. But motives take a variety of forms and are designated by many different terms: Such as needs, desire, tension, sets, determining,

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tendencies, attitudes, interests, persisting stimuli and so on. This is a part of successful
learning. The process of motivation has been shown below:

\[
\text{Motive} \rightarrow \text{Behaviour} \rightarrow \text{Goal} \rightarrow \text{Feedback}
\]

Continuing with the same motive or switching over to new motive

The motivation generates enthusiasm which assists in achieving different types of
goals which is called achievement motivation and has been development by McClellanal,
Atkinson, Clark and Howell (1953). They defined this concept as “\textit{concern over
competition with standards of excellence}” e.g. wining or doing as well as better than
someone else.

Atkinson (1958) came to the conclusion that in the individual there is the need for
achievement. A form of process in context of achievement motivation is:

\[
\text{Goal/Target} + \text{Ability} + \text{Motivation} = \text{Achievement Motivation}
\]

Therefore achievement motivation has been considered as an important concept in the
dynamics of human behaviour. Tripathi (2004); concluded that motivation is positively
associated with academic achievement. The motivation applied for achieving academic
objective is termed as academic achievement motivation. Sinha & Ahmad (2007); reported
that adolescents of different types of schools have different levels of academic achievement
motivation. Academic Achievement Motivation may be expressed as follows:

\[
\text{Achievement Of Academic Goal/Target} + \text{Motivation} = \text{Academic Achievement Motivation}
\]

The motivational environment of school is extremely important in the evaluation of
an adolescent’s academic performance and the teachers’ acceptance plays a major role in
determining the academic achievement motivation of adolescents. School environment has
also various domains. Socio-emotional environment is one of the most important domains of
school. Gabriel, Bonnie & Sidney (2001); results were consistent with the idea that careful
attention needs to be given to the socio-emotional environment of middle schools,
particularly for young adolescents preoccupied with issues of self identity.

Socio- emotional environment is a factor which is responsible for variation in
adolescent’s personality, emotions and relationship with others. Socio-emotional factor
selective theory developed by Stanford psychologist, \textit{Laura Carstensen} is a life span theory
of motivation. The theory maintains that as time horizons shrink, as they typically do, with age, people become increasingly selective, and investing greater resources in emotionally, meaningful goal and activities. According to the theory, motivational shifts also influence cognitive processing and cognitive processing is also related to academic achievement of adolescents.

Socio-emotional school environment can play a dominant role in the development of adolescents’ academic achievement motivation. It may have an impact on academic achievement motivation of adolescents and can also form the basis of the adolescents’ education and vocational success. Keeping in mind the importance of academic achievement motivation at the adolescent stage, the researchers want to study how socio-emotional environment of a school contributes and has impact on this psychological variable of motivation. The present study focuses on the relation between socio-emotional school environment and academic achievement motivation of adolescents.

**Objectives:** - The present study is conducted with the following objectives-

1. To study the relation between socio-emotional school environment and academic achievement motivation of male-adolescents.
2. To study the relation between socio-emotional school environment and academic achievement motivation of female- Adolescents.
3. To study the relation between socio-emotional school environment and academic achievement motivation of adolescents (total).

**Hypothesis:** - Following null hypothesis (Ho :) is framed to fulfill the objectives:-

Ho: 1- There is no relation between academic achievement motivation and socio-emotional school environment of male adolescents.
Ho: 2- There is no relation between academic achievement motivation and socio-emotional school environment of female adolescents.
Ho: 3-There is no relation between academic achievement motivation and socio-emotional school environment of adolescents (total).

**Research Design:**

1. **Research Method:** - Survey method is used in this present description research.
2- **Population:** The adolescents of higher secondary school of Kanpur city form the population of present study.

3- **Sample:** The researchers selected 500 adolescents from different higher secondary schools of Kanpur city by lottery random sampling method. In the present study Kanpur city is divided into five zones: North, South East, West and Central, 50 male adolescents and 50 female adolescents are randomly selected in each zone. Total 250 male adolescents and 250 female adolescents from higher secondary schools are taken. But the investigation is delimited to U.P. Board schools. These adolescents are the students of class 11\(^{th}\) & 12\(^{th}\).

4- **Tools:**

4.1 **Academic Achievements Motivation:** To measure academic achievements motivation the standardized test (S.A.A.M.T.) By Dr. T.R. Sharma (1984) is used. It has 35 items and the maximum possible score is 35. Each item of the test is scored as either +1 or 0.

4.2 **Socio-Emotional School Environment:** Socio-emotional school climate inventory constructed by Dr. (Mrs.) Renuka Kumari Sinha and Mrs. Rajni Bhargava (1994). It is a standardized test S.E.S.C.I. has 70 items. 35 Items belonging to social school climate and 35 items to emotional school climate. All the items constitute the socio-emotional school climate. This is a two point scale. Marking for negative statements 0, 1 for ‘Yes’ and ‘No’ for positive statement 1, 0 for ‘Yes’ and ‘No’

5- **Procedure:** The tools were administered on the above said population personally. Before administering the questionnaire a rapport was establishment with the subjects and they were assured confidentiality of their responses. The filled up questionnaires were then scored in the prescribed manner given in the respective manuals. Obtained data was tabulated for statistical analysis.

6- **Statistical Technique:** The date is analyzed with the help of co-relation.

**Analysis and Interpretation:** The analyzed data have been presented in Tables 1, 2 & 3

**Table-1**
Co-relation between academic achievement motivation and socio-emotional school environment of Male-adolescents.

(N= 250)

<table>
<thead>
<tr>
<th>School Environment</th>
<th>Academic Achievement Motivation</th>
<th>Co-efficient of co-relation</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td></td>
<td>0.38</td>
<td>Significance at 0.05 Level (&gt; 0.126)</td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
<td>0.50</td>
<td>Significance at 0.05 Level (&gt; 0.126)</td>
</tr>
<tr>
<td>Socio-emotional</td>
<td></td>
<td>0.51</td>
<td>Significance at 0.05 Level (&gt; 0.126)</td>
</tr>
</tbody>
</table>

From the perusal of table-1, it is seen that co-relation between academic achievement motivation and social, emotional & socio-emotional school environment of male adolescents is 0.38, 0.50 & 0.51. This value is more then 0.126 (0.05 level). Therefore the relationship is significant, which shows that the null hypothesis (Ho: 1) is rejected. Thus there is positive and significant correlation between academic achievement motivation and socio-emotional school environment of male adolescents.

Table-2
Co-relation between academic achievement motivation and Socio-emotional school environment of Female-adolescents.
(N = 250)

<table>
<thead>
<tr>
<th>School Environment</th>
<th>Academic Achievement Motivation</th>
<th>Co-efficient of co-relation</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td></td>
<td>0.42</td>
<td>Significance at 0.05 Level (&gt; 0.126)</td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
<td>0.41</td>
<td>Significance at 0.05 Level (&gt; 0.126)</td>
</tr>
<tr>
<td>Socio-emotional School environment</td>
<td></td>
<td>0.52</td>
<td>Significance at 0.05 Level (&gt; 0.126)</td>
</tr>
</tbody>
</table>
From the perusal of table 2, it is seen that co-relation between academic achievement motivation and social, emotional and socio-emotional school environment of female adolescents is 0.42, 0.41 & 0.54. This value is more then 0.0877 (0.05 level). Therefore the relationship is significant, which shows that the null hypothesis (Ho: 2) is rejected. Thus there is a positive and significant co-relation between academic achievement motivation and socio-emotional school environment of female adolescents.

**Table-3**

**Co-relation between academic achievement motivation and Socio-emotional school environment of adolescents.**

(N=500)

<table>
<thead>
<tr>
<th>School Environment</th>
<th>Academic Achievement Motivation</th>
<th>Co-efficient of co-relation</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td></td>
<td>0.42</td>
<td>Significance at 0.05 Level (&gt;0.0877)</td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
<td>0.41</td>
<td>Significance at 0.05 Level (&gt; 0.0877)</td>
</tr>
<tr>
<td>Socio-emotional</td>
<td></td>
<td>0.54</td>
<td>Significance at 0.05 Level (&gt; 0.0877)</td>
</tr>
<tr>
<td>School environment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the perusal of table-3, it is seen that co-relation between academic achievement motivation and social, emotional and socio-emotional school environment of adolescents is 0.42, 0.47 & 0.54. This value is more then 0.0877 (0.05 level). Therefore the relationship is significant, which shows that the null hypothesis (Ho: 3) is rejected. Thus there is a positive and significant co-relation between academic achievement motivation and socio-emotional school environment of adolescents.

**Discussion:** - Results (Table-1, 2 & 3) disclose that a significant co-relation exists between academic achievement motivation and socio-emotional school environment of adolescents. This shows that the socio-emotional school environment affects academic achievement motivation of adolescents. Socio-emotional school environment can either impede or support motivational learning. It also provides motivational information on assessment instruments for measuring school environment. Ahluwalia (1985) and Hamilton (1995); have similar results that school environment of adolescents’ influences academic achievement motivation.
directly and indirectly. It can be said that the socio-emotional school environment is deciding factor in the academic achievement motivation of adolescents.

**Conclusion:** - The conclusion of the study are as follows:

1- There is a significant relation between academic achievements motivation and socio-emotional school environment of male adolescents.

2- There is a significant relation between academic achievement motivation and socio-emotional school environment of female adolescents.

3- There is a significant relation between academic achievement motivation and socio-emotional school environment of adolescents (total).

**Educational Implications:** - Competition has been used as motivating influence during the entire history of pedagogy so socio-emotional school environment can play a crucial role in developing academic achievement motivation by the following ways:

- Create a warm, orderly environment in the classroom and in school. The conducive environment develops academic achievement motivation among adolescents and avoids higher stress and disorganization.
- Focus attention on desired educational goals and make clear understanding of academic achievement motivation in life.
- Teachers encourage the development of positive motive and make it clear to the adolescents that new motives will improve their self image.
- Emphasize upon the fact that new motive is an improvement of prevailing educational value,
- Help adolescents to set and attain realistic educational goals and provide incentives and motivate them if necessary.
- Make an effort to develop conducive socio-emotional environment in the classroom so that every adolescent should feel elevated and feel a sense of belonging to higher group of adolescents.

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Abstract:

Constructivism sees learning as a dynamic and social process in which learners actively construct meaning from their experiences in connection with their prior understandings and the social setting. In the context of science teaching, it is observed that students conceptualize science as making sense of the world around them and as a mean of discovering theories, laws, and principles associated with reality. The constructivist epistemology asserts that the only tools available to the knower are the senses. It is only through seeing, hearing, touching, smelling, and tasting that an individual interacts with the environment. The individual builds a picture of the world from the message from these senses only. Therefore, constructivism asserts that knowledge resides in students and that knowledge cannot be transferred without any transformation from the head of a teacher to the heads of students. Students try to make sense of what is taught by trying to fit it with their previous experiences. Teacher seeks students' point of view in order to understand the formation of their concepts, not to validate their learning as in a traditional classroom. Constructivist classroom places a child in the centre position of the classroom. Ideas initiated by student are accepted and encouraged. Students' opinions are valued. The National Curriculum Framework-2005 brought out by the NCERT emphasizing constructivist approach in classroom states: “Teachers should also nurture their classroom spaces as places where children can ask questions freely.”

Constructivism is an approach to teaching and learning based on the premise that cognition (learning) is the result of "mental construction." In other words, students learn by fitting new information together with what they already know. Constructivists believe that learning is affected by the context in which an idea is taught as well as by students' beliefs and attitudes.

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Constructivist teaching is based on recent research about the human brain and what is known about how learning occurs. Caine and Caine (1991) suggest that brain-compatible teaching is based on 12 principles:

1. "The brain is a parallel processor". It simultaneously processes many different types of information, including thoughts, emotions, and cultural knowledge. Effective teaching employs a variety of learning strategies.
2. "Learning engages the entire physiology". Teachers can't address just the intellect.
3. "The search for meaning is innate". Effective teaching recognizes that meaning is personal and unique, and that students' understandings are based on their own unique experiences.
4. "The search for meaning occurs through 'patterning'". Effective teaching connects isolated ideas and information with global concepts and themes.
5. "Emotions are critical to patterning". Learning is influenced by emotions, feelings, and attitudes.
6. "The brain processes parts and wholes simultaneously". People have difficulty learning when either parts or wholes are overlooked.
7. "Learning involves both focused attention and peripheral perception". Learning is influenced by the environment, culture, and climate.
8. "Learning always involves conscious and unconscious processes". Students need time to process 'how' as well as 'what' they've learned.
9. "We have at least two different types of memory: a spatial memory system and a set of systems for rote learning". Teaching that heavily emphasizes rote learning does not promote spatial, experienced learning and can inhibit understanding.
10. "We understand and remember best when facts and skills are embedded in natural, spatial memory". Experiential learning is most effective.
11. "Learning is enhanced by challenge and inhibited by threat". The classroom climate should be challenging but not threatening to students.
12. "Each brain is unique". Teaching must be multifaceted to allow students to express preferences.

**Constructivism (learning theory)**

Constructivism is a theory of knowledge (epistemology) which argues that humans generate knowledge and meaning from their experiences. Constructivism is not a specific
pedagogy, although it is often confused with constructionism, an educational theory developed by Seymour Papert. Piaget’s theory of costructivist learning has had wide ranging impact on learning theories and teaching methods in education and is an underlying theme of many education reform movements. Research support for conductivist teaching techniques has been mixed, with some research supporting these techniques and other research contradicting those results.

Formalization of the theory of constructivism is generally attributed to Jean Piaget, who articulated mechanisms by which knowledge is internalized by learners. He suggested that through processes of accommodation and assimilation, individuals’ construct new knowledge from their experiences. When individuals assimilate, they incorporate the new experience into an already existing framework without changing that framework. In contrast, when individuals’ experiences contradict their internal representations, they may change their perceptions of the experiences to fit their internal representations. According to the theory, accommodation is the process of reframing one’s mental representation of the external world to fit new experiences. It is important to note that constructivism is not a particular pedagogy. In fact, constructivism is a theory describing how learning happens, regardless of whether learners are using their experiences to understand a lecture or following the instructions for building a model airplane. In both cases, the theory of constructivism suggests that learners construct knowledge out of their experiences. However, constructivism is often associated with pedagogic approaches that promote active learning, or learning by doing.

Implications for Curriculum and Practice

Teaching for Construction of Knowledge

In the constructivist perspective, learning is a process of the construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials / activities presented to them (experience). For example, using a text or a set of pictures / visuals on a transport system coupled with discussions will allow young learners to be facilitated to construct the idea of a transport system. However, there is a social aspect in the construction process in the sense that knowledge needed for a complex task can reside in a group situation. In this context, collaborative learning provides room for negotiation of meaning, sharing of multiple views and changing the internal representation of the external reality. Construction indicates that each learner individually and socially
constructs meaning as he/she learns. Constructing meaning is learning. The constructivist perspective provides strategies for promoting learning by all.

The teacher’s own role in children’s cognition could be enhanced if they assume a more active role in relation to the process of knowledge construction in which children are engaged. A child constructs her/his knowledge while engaged in the process of learning. Allowing children to ask questions that require them to relate what they are learning in school to things happening outside, encouraging children to answer in their own words and from their own experiences, rather than simply memorizing and getting answers right in just one way – all these are small but important steps in helping children develop their understanding.

‘Intelligent guessing’ must be encouraged as a valid pedagogic tool. Quite often children have an idea arising from their everyday experiences, or because of their exposure to the media, but they are not quite ready to articulate it in ways that a teacher might appreciate. It is in this ‘zone’ between what you know and what you almost know that new knowledge is constructed. Such knowledge often takes the form of skills, which are cultivated outside the school, at home or in the community. All such forms of knowledge and skills must be respected. A sensitive and informed teacher is aware of this and is able to engage children through well-chosen tasks and questions, so that they are able to realize their developmental potential.

Active engagement involves enquiry, exploration, questioning, debates, application and reflection, leading to theory building and the creation of ideas/positions. Schools must provide opportunities to question, enquire debate, reflect, and arrive at concepts or create new ideas. An element of challenge is critical for the process of active engagement and learning various concepts, skills and positions through the process. What is challenging for a particular age group becomes easy and uninteresting for the other age group, and may be remote and uninteresting at another stage.

So often, in the name of ‘objectivity’, teachers sacrifice flexibility and creativity. Very often teachers, in government as well as private schools, insist that all children must give identical answers to questions. Such arguments make a travesty of the meaning of learning and only serve to convince children and parents that schools are irrationally rigid. We must ask ourselves why we only ask children to give answers to questions. Even the ability to make a set of questions for given answers is a valid test of learning.

Learning takes place through interactions with the environment around, nature, things and people, both through actions and through language. The physical activity of moving,
exploring and doing things, on one’s own with one’s peers or in the company of adults, and using language – to read, to express or ask, to listen and to interact – are the key processes through which learning occurs. The context in which learning takes place is thus of direct cognitive significance.

Much of our school learning is still individual based (although not individualized). The teacher is seen as transmitting ‘knowledge’, which is usually confused with information, to children, and organizing experiences in order to help children learn. But interaction with teachers, with peers, as well as those who are older and younger can open up many more rich learning possibilities. Learning in the company of others is a process of interacting with each other and also through the learning task at hand. This kind of learning is enriched when schools enroll children from different socio-economic backgrounds.

In the early primary school years, a beginning has been made in the area of group work. Projects and activities that can be carried out by groups need to become a feature of learning to the middle and high school also. There are ways in which such group learning can be assessed and evaluated. Schools could also consider giving mixed age groups of children projects to do together. In such mixed groups, there is much that children can learn from each other, such as team work and social values. In the company of others, one has opportunities of participating in larger tasks where one may find a niche to contribute to, thus achieving something above one’s own potential, and one may be able to try out what one does not fully know. Group learning tasks, taking responsibility, and contributing to a task at hand are all important facets of not only acquiring knowledge but also in the learning of arts and crafts. In a multi-grade class situation, such vertical grouping, which cuts across different grades, and which allows a single activity to be used across different age groups, could provide a pedagogically feasible and sound curriculum plan.

Teaching learning process is not only an arrangement of teaching strategies but setting of situations and environment in which learning process is recognized and supported. For this situation to be created for science teaching learning, a constructivist classroom has certain characteristics which are as follows : (i) A constructivist classroom is Child Centered. NCF2005 establishes the need to recognize the child as a natural learner, and knowledge as the outcome of the child’s own activity. Students’ experiences, their voices and their active participation are valued. Focus is given to what students are learning rather than what the teacher is teaching.

(ii) Students’ prior knowledge is acknowledged and valued. During teaching learning process
students construct meanings that fit with their experiences and expectations. This can lead them to construct meanings different from what was intended by a teacher. As a result, students experience a cognitive conflict. In other words, students distinguish between scientific explanation and their “real world” explanations. (ii) Students and teachers are interactive in a constructivist classroom. An interaction between teacher and students creates an environment within which emerging ideas can grow. Collaborative teaching, group discussion, group work and assignment and project work are some of the essential elements of an interactive classroom. Students interact with their peers as well as teacher. (iv) ‘Others’ are important in constructivist classroom. Learning is restructuring the knowledge that students already have. Students learn science by observing those phenomenon and events and performing experiments and activities and interacting with others. As others are part of students’ experiential world, those are important for constructing their knowledge. Interaction with others constraint their thinking; hence they make adaptation in their thinking to make new meaning of the world. Others are part of their experiential world. (v) Negotiation is compulsory for constructivist teaching. Negotiation is an important element for constructivist classroom. It brings teacher and learner on a common platform. Out of negotiation comes a sense of ownership in students for the work they are doing. Therefore they become committed to learning. Active involvement of students in their own learning as well as in other actions such as doing activities and at the same time maintaining discipline is a vital reality of constructivist classroom. (vi) Process Approach is emphasized in constructivist classroom. Process approach in science is method and techniques of learning science. A context is created within which students are able to explore new ideas and experiences. Students are provided opportunities to perform and participate in various activities and experiments. Thus, from a constructivist perspective, science is not a search for truth. It is a process that assists us to make sense of our world. It is an active, social process of making sense of experiences, as opposed to what we now call “school science”. From a constructivist perspective, learning science becomes more like the science that scientists do. (vii) Management of the classroom is democratic. Democratic environment of the classroom facilitate constructive learning. Such environment emphasizes shared responsibility in learning and decision making. Students are directly involved in all the activities of the classroom. Relationship among students and teachers is also democratic and responsive. It stimulates interest in the subject matter and develops a sense of self-achievement in students. Teacher’s focus is on students learning rather than on her own
performance. (viii) Students learn from whole to part in a constructivist classroom. Teacher presents the curriculum holistically in a constructivist classroom, not in parts. She organizes the instructional materials in conceptual clusters, or themes. Instructions in the classroom are provided inter-relating many contents area at once. Emphasis is given on primary facts rather than on a set of disconnected discrete facts. (ix) Power in a constructivist classroom is shared. Empowering students to learn themselves is basic in constructivist philosophy. Teacher makes every effort to develop skills and abilities to become an autonomous learner. Emphasis is given on students thinking rather than on their answers and memorization of facts. Students and teachers work together with concrete objects to investigate the concept of science themselves. It helps them to think critically and gain confidences in problem solving abilities. Learning takes place naturally. It provides students the power to construct their knowledge. Contrary to the popular belief a constructivist classroom is highly organized. In such a classroom control comes from involving the students in responsibilities and not from imposing strict rules. The teacher focuses only on students learning. (x) Assessment is interwoven with teaching learning process. In a constructivist classroom of science, assessment of students learning is done in the context of daily teaching. NCF2005 suggests that maintaining a daily diary based on observation helps in continuous and comprehensive evaluation. Assessment is not considered as separate and patchwork, but interwoven in teaching learning process of a constructivist classroom. It is done in totality of learning experiences. Science teacher in a constructivist classroom embraces “alternative assessment” strategies also, in order to truly understand what students are thinking and to identify the steps they have taken to construct meaning out of their learning experiences. Alternative assessment complements the constructivist approach to teaching by providing ongoing assessment of learning and more accurate measure of students’ actual understanding. Displays of attainment and progress by assessment enhance understanding of concepts of science, which can become jumping off points for further enrichment of the students’ learning.

Recent Curriculum Reform in India and Constructivism- In the National Curriculum Framework 2005 formulated by NCERT for the reform of school education in India, the constructivist approach and its implications for practice have been brought out in detail in which the key principles given are: In the constructivist perspective, learning is a process of construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials/ activities presented to them.
(experience). The structuring and restructuring of ideas are essential features as the learners’ progress in learning. The engagement of learners, through relevant activities, can further facilitate in the construction of mental images of the relationships (cause-effect) and collaborative learning provides room for negotiation of meaning, sharing multiple views and changing the internal representative of external reality.

Conclusion: From a constructivist perspective, science is not the search for truth. It is a process that assists us to make sense of our world. Using a constructivist perspective, teaching science becomes more like the science that scientists do. Indeed, actively engaging students in science is the goal of most science education reform. Also science knowledge as accepted today in scientific communities in principle is tentative in nature and open for revision. It is an enjoyable activity and role of the teacher is very challenging. Thus constructivism is a learning theory based on scientific observation and research and explains how people learn. Just as teachers have to learn how to teach from a constructivist point of view, students must also learn how to be effective learner. Educating students to be effective learners is an important priority in establishing environments conducive to effective learning of science. According to NCF 2005, in the constructivists’ perspective, learning is a process of construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials/activities presented to them. The curriculum must be such which enable children to find their voices, nurture their curiosity-to do things, to ask questions and to pursue investigations, sharing and integrating their experiences with school knowledge rather than their ability to reproduce textual knowledge. Constructivist epistemology assumes that learners construct their own knowledge on the basis of interaction with their environment. Constructivism focuses on knowledge construction, and not on knowledge reproduction. Views of the external world differ of each others because of our unique set of experiences.

References:


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Concerns on Science and Mathematics Education in India

Dr. Akanksha Singh

The year 2011, may mark a new beginning, it’s the year which marks the end of two decades of economic reform started in 1991. Economic reforms brought reforms in every sphere. In broader scenario whole world has witnessed phenomenal changes over last 20 years and India has been no exception. In India NREGS (national rural employment guarantee scheme) NRHM (National rural health mission) SSA (Sarv Shiksha Abhiyan) they are three revolutionary steps for improvement of livelihood, nutrition & health and education. Education is no exception. Government successfully implemented SSA in India; and made earnest efforts to improve access. Now 97% villages have a primary school. Government has made significant improvement on infrastructure. Digital learning, distance learning increasing literacy rate are many terms which are quite popular, but it’s true our Indian education system is not in good health. A person at lower level of social ladder feels that education as a major force which can improve one’s status in society and it can promote him by fetching a good job and consequently respectable position in society. But all dreams shatter when they find that there’s no change on their social position which compel them to question on the education. It shows the ASER (annual status of education report) (2011) conducted by Pratham shows that nearly 47% class V students cannot read class II text, while over 63% of class III students cannot subtract. Another report Wipro EI Quality Education study 2011 released on Dec. 2011 of India’s elite schools on - Student performance in Class IV, VI, VIII in Science, Social Sciences, Mathematics and English on following aspects

- student attitudes and values
- learning environments & organizational aspects of the school - structure, decision making, leadership's vision and thinking, classroom practices etc
- co-scholastic areas - perspective and facilities provided

Report shows that students in top schools exhibit rote learning. It says Students in Top schools of India performed lower than the international average. While they performed on par at class 8 level. Report says that - The improvement in class 8 level was due to the higher
performance observed on procedural questions. That means questions that require straightforward use of learnt procedure and it is because of rote learning.

And the most shocking results of the programme for international student assessment (PISA)\textsuperscript{iii}, PISA (Programme for International Student Assessment) is an international study which began in the year 2000. It aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students participating from 74 countries/Provinces. It tries to find that “Are students well prepared for future challenges?” Can they analyze reason and communicate effectively? Do they have capacity to continue learning throughout life? The OECD (organization for economic co-operation and development) Programme for International Student Assessment answer these questions through its survey of 15 year olds in the principal industrialized countries.

PISA assesses how far students near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in society. In all cycles, the domains of reading, mathematical and scientific literacy are covered not merely in terms of mastery of the school curriculum, but in terms of important knowledge and skills needed in adult life. According to PISA “Mathematical literacy is an individual’s capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments and to use and engage with mathematics in ways that meet the needs of that individual’s life as a constructive, concerned and reflective citizen.” and "Scientific literacy is the capacity to use scientific knowledge, to identify questions and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity."

PISA Results of this year 2012 shows that while Shanghai ranks no.1 in reading, science literacy and math, Tamilnadu and Himachal Pradesh are at the bottom, Better only than Kyrgyzstan. In science, Kyrgyzstan beats Himachal. It means there is something which is severely wrong. Especially science and mathematics foundation are very pathetic. It is essential to revamp our education system it’s time to ponder how it’s shaping and what actually we want it to shape it further.

UNESCO science report 2010\textsuperscript{iv} says about trends in human capital that in terms of number of science researcher China is on the verge of overtaking both the USA and EU (European union). these three countries each represent about 20% of the world’s stock of researcher. If add Japan’s share of 10% and 7% of Russia; it highlights that these five countries has 35% of
world population but three quarter of all researcher in science. India even with such a big population has only 2.2% science researcher.

**Background of Science Education in India**

In 1857 universities of Bombay Calcutta and Madras were established and the foundations for basic science were laid. Some of the well known scientists of this era were M.N.Saha, C.V.Raman, Birbal Sahni, J.C. Bose, P.C.Mahalanobis, S.N.Bose, P.C.Ray and S.Ramanujan. They were inspiration for many.

After independence it was the vision of Jawaharlal Nehru that science and technology can drive India towards economic growth. It was felt that we need to produce more and better scientist. This thought gave the direction to school science education programme. Science education in schools as well as higher science education received great emphasis and the pragmatic policies followed over the years ensured that the country came to possess one of the largest and one of the most diverse science education infrastructure. To impart science education and training there came up several national institutes, the Indian Institutes of Technology (IITs), more than 200 universities, and over 12,000 colleges. This infrastructure has successfully produced one of the largest scientific manpower in the world. But today, while in the emerging global scenario it is being realized that the only way to improve the nation's competitiveness is through better science and technical Education. In Science and Engineering education, it is also being felt that the science education system, as it stands today, needs a drastic makeover for the nation to really derive any competitive advantage in the years to come.

**Problem in Science and mathematics education**

**At School Level**

Since independence emphasizing science education in schools led to science curriculum laden with content and factual information. It is common practice that students of class 6 to 8 learn the definition of science without understanding the concept behind that. Teacher never opens the mesmerizing vistas of scientific world; possible reason that the teacher may be himself the product of rote learning. Demonstrations are rare, laboratories are not well equipped and syllabus is not supported with activities. This led to memorization of facts only. Consequently students find science as a boring and difficult subject.

India science report says that Science teaching in Indian schools needs a radical overhaul to stop students losing interest. Over 60 percent of science post-graduates are unemployed.
it is vital to strengthen the quality of science teachers, their teaching methods, and the education infrastructure in schools. Amitabha Mukherjee says very true that the syllabi and textbooks of the last 40 years suggest that the (unstated) aim of school science education has been to produce scientists. Hence syllabi are dominated by the disciplinary demands of different branches of science, and there is a relentless downward pressure to cover more content in earlier classes.

At Undergraduate level-

In India undergraduate research is unknown phenomenon, in US it is quite popular but in our country these things are very much restricted. Need of the hour is quality revolution in education or amplify the level of performance. In present study main thrust is on how to bring qualitative changes in science and math’s education at school level.

Methodology-

Present study was carried out by qualitative method. Eminent people around 30 in number from various fields of education were invited, which included two officers of Indian Administrative services dealing with Education, principal of DIET, Professors from Physics, Chemistry and Mathematics department, professor of Education Department and all those who are concerned with present system of education. It started with a brief presentation on PISA report afterwards they were allowed to dispense their feelings regarding present state and how things can be improved. Each individual had equal opportunity to express their views and the chairperson of the session tried to get maximum output from each individual. This session was purely voluntary. Proceedings of this session were recorded properly. Few participants were approached further for their views. It was successful Brain storming session which was quite helpful for emerging out hidden agendas in peoples mind. The PISA report was criticised by some analysts, who said that sampling methods were inadequate but it ignited the discussion over our present educational scenario. After the session following problems emerged.

Discussion over Science and Mathematics education brought peoples concern over our education system also. While discussion various problems emerged.

Problems in Present education system-

- In our schools quality of teaching learning is very poor. Teachers have Poor understanding of educational aims as well as how children learn. Classroom teaching is not interactive.
• Insufficient teachers and infrastructure for students seeking in admission in science stream. Students are several times more than facilities. This led to half hearted science education.

• Archaic administrative methods do not allow teachers to introduce some innovative practices. Beaurocratic upper hand rather than educationist or technical hold is also a problem.

• Teachers do not have mastery over the content. There is very little accountability of teachers, and little attention on talent of teachers. Teachers are choosing it as profession for easy money not out of interest, or for honestly serving the nation. Irregularity of teachers is also due to other government duties in government schools.

• Emphasis on literacy rather than capacity building. Overall development of child is lacking. Emphasis on obtaining good marks in examination is the criteria of good school. Less emphasis on development of concept learning. Less emphasis on cooperative learning.

• Global context is lacking from our education system

• Lack of proper guidance and counseling programme restrict many students to opt the subjects.

Everyone wanted that it is essential to bring liveliness in our education system back and that’s not possible without the commitment of our nation’s human resources; and that is teachers of this nation. Government is paying handsome salary everyone wants to be teacher but only few are interested in teaching. There are ways in the system by which one can draw salary without fulfilling his or her duties. Qualified appointed teachers put someone for performing their duties. This third person gets little amount for which he or she only hold the children for certain period. They are least interested in teaching. This corruption is dwelling from top to bottom. At top level those who have authority to regulate even they are not performing the task sincerely. Be it Basic siksha Adhikari or Block Resource Centre in charge or DIET in charge. All are enjoying the benefit of absenteeism of these teachers. Even teachers want job and salary but not duties attached with the position.

**How to bring changes**

**General**

• Emphasis on holistic development of child to arouse the curiosity among children

Which motivate them for further tapping of the knowledge
Invoke the thrust for knowledge
Ignite the fire for learning
Connectedness between teacher and student.
Students should know effective learning strategies
Despite of consistent suggestion teachers rarely adopt play way method or heuristic method for learning
Education is more important than mere literacy, in our education system understanding and application of knowledge is not encouraged.
Teacher should take the responsibility as agent of social change. And take it as passion or social service rather than means of livelihood.
Teachers personality influences a student a lot teacher should consistently work over his /her strength and weakness
Teaching learning process should be more energetic and vibrant.
Workshops and development programmes for teachers is quite essential
Regular feedback from students and parents for continuous up gradation at primary level emphasis on 3Rs
Emphasis on group projects rather than competition till class 10th.
Holiday and vacations timetable needs reconsideration. How long it should be and separate activities for child in these vacations with changing climatic conditions. There should me month allotted for any kind of project in school timetable. It will foster creativity and increase team spirit among the students.
Time to ponder over education of gifted child and provide them more enriching atmosphere.
Counseling of the parents should also be the part of the curriculum.
Incentives and increments to teachers
School complex scheme-middle school accountable for 5 primary schools. Likewise one secondary school should be accountable for 5-8 middle school. One higher secondary school accountable for 5-8 secondary schools.
Paradigm shifts from urban based to rural based. Head offices in remote rural or tribal areas and district education officer and basic siksha Adhikari must have permanent station in remote areas.
• Public and private schools to be made accountable towards the disadvantage group. In present context government decisions is quite welcoming but some solid strategy need to be formulated.

• Resource centre at clusture, block and district level and real sense they work for training and consultancy.

• Resource centers to conduct refresher courses, seminars, exhibitions, dialogue sessions etc.

• Assessment at all levels in classroom

• Play grounds should be essential part of schooling. Play time may inculcate many life skills among children.

• Continuous and transparent recruitment policy of teachers should be evolved.

• Urban –rural divide, public –private institutional divide

• Quality of education should be main concern

• Evolving distance education mode in a better way so without burdening resources can be utilized

• Accountability of the teachers should be ensured

**Specific for Science and Mathematics education**

• Content of the science books need to be revised

• Need of the hour is to change the course of science ,if our schools are not able to bear the infrastructure of laboratories change the curriculum with those experiments which can be carried out easily and correlated to everyday science.

• Interesting methods of imparting knowledge at school level. Bookish knowledge should be little.

• Quiz games sports, demonstration expert discussions should be introduced as mode of teaching learning.

• Problem solving should also be integral part of the teaching learning process, providing information should not be only motive.

• Emphasis on understanding of concepts rather than memorization of the definition only. That means practical and conceptual knowledge.

**Suggestions for teacher education** -

• Place of subject knowledge of teachers is very essential.

• Teachers during teacher training must undergo internship period
• It is essential to train pupil teacher to design their subject material transaction in
innovative manner. Try it out and evaluate its impact on student learning.
• Content mastery must be ascertained at B.Ed. and B.T.C. level
• Creativity and originality must be nurtured by the teacher through their respective
subject areas.
• School subject specific teacher preparation programmes be designed in place of
simple regular B.Ed./B.T.C. for all prospective teachers.
• Freedom with accountability of teachers.
• Science and math’s teaching should be fun and activity based.

It is essential to prepare the child for future challenges. Thrust area should be to enhance their
reasoning analytical and communication ability. According to national curriculum framework
2005 it is high time to give our children some taste of understanding, following which they
would be able to learn and create their own version of knowledge. That’s why it is important
to break the shackles of rote learning from our education system and bring some vibrancy in
the system. Main challenges for Indian education system is to inculcate healthy environment
and shift from rote method to vibrant method of learning. Education is not a physical thing; it
is nourished through proper interaction of parent, teacher and fellow students. Ultimate
measure of any education system is not how many children’s are enrolled but how well they
learn, how much healthy their learning environment is. Here healthy environment means safe,
protective, stimulating and gender sensitive.

Endnote:

• i Annual status of education report 2010-2011 facilitated by Pratham retrieved from
  www.pratham.org/aser-2011

• ii Quality education study, educational initiatives of Wipro retrieved from
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• iii www.pisa.oed.org

• iv UNESCO science report 2010


