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of the Institute of Professional Excellence and Management

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## C O N T E N T S

"Teacher Education in Post Independent India: Affords to Bring Quality and Excellence Through Training and Professional Development"

*Prof. Sudershan K. Pathania*

"Heavy bags? ----A solution through Mathematics"

*Mrs. Sadhana S. Hulyalka*

"Attitude of School Teachers Towards Inclusive Education"

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"साइबर क्राइम की 21वीं शताब्दी में एक नई चुनौती"

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"पठन में स्कीमा सिद्धान्त का अनुप्रयोग"

*Ms. Viditi Rastogi*



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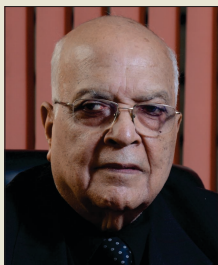
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• Volume 2 • July 2017



Founder, IPEM Group of Institutions

**Dr. B.S. Goel**

(04.08.1937-10.01.2017)

A Visionary, Educationist & Philanthropist with Values

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# EDITOR'S MESSAGE

An investment in knowledge pays the best interest.

**-Benjamin Franklin**

**I**t is with great pride, enthusiasm and anticipation that I invite you to read current issue of IPEM JOURNAL FOR INNOVATIONS IN TEACHER EDUCATION (IJITE) – 'A new series of IPEM Journal'. In this issue of IPEM JOURNAL FOR INNOVATIONS IN TEACHER EDUCATION (IJITE) of CTE, you will find an array of works, representing some of the variety and excellence that IPEM promises. The future of India lies in the present classrooms and teachers who provides the knowledge to the students that brings an opportunity to the students to make a clear difference in the society. There are a lot of challenges a teacher is facing in the classroom of today. Thus to meet those challenges, the teacher needs to be smarter than earlier and innovative in her practices. IJITE intends to be a leader in facilitating a new kind of platform to the teachers, academicians, administrators and educational planners to transforms the ideas in academia. It not only will help in promoting research in the field of teacher education but also strengthen the relationship between communities and institution of higher learning.



Success in the knowledge economy comes to those who know themselves-their strength, their values, and how they best perform'. **-Peter Drucker**

Keeping the quote, an enormous amount of work has gone into the development of this journal and I believe you will see that effort reflected in this edition and in the impact it will have in the field of teacher education.

As the Editor of IPEM JOURNAL FOR INNOVATIONS IN TEACHER EDUCATION (IJITE), I take this opportunity to express my sincere gratitude to the authors who have chosen our journal to disseminate their research work.

Further, I would like to thank the publisher Mr. Anupam Goel Associate Editor, Assistant Editors, Review Committee members, Ex Executive Director and Director General of IPEM for the success of this Journal.

We look forward to receive the contributions for our next issues from academicians, scholars and professionals to ensure consistency and the success of the Journal. We welcome comments and suggestions that would advance the objectives of the Journal.

**Dr.Sugandha Goel**  
(Editor)

## From the Editorial Board

**W**e are glad to present Second Edition of Teacher Education journal "IPEM JOURNAL FOR INNOVATIONS IN TEACHER EDUCATION" July 2017. Publishing a research journal is a tough task. However, we braved all the odds, and published this issue as always, on time.

We followed a rigorous method to select the papers. All the papers we have included in this issue of IPEM JOURNAL FOR INNOVATIONS IN TEACHER EDUCATION are peer reviewed only those papers which went through this rigor have been given space in this journal.

The issue has research papers related to innovation in the field of Education. The research papers focus on the Teacher Education in Post Independent India: Affords to Bring Quality and Excellence through Training and Professional Development, Heavy bags? ---A solution through mathematics, Attitude of School Teachers towards Inclusive Education, Internet Addiction with Mental Health among Adolescents, A Study on Academic Stress among B.T.C. Students of Rohtak District of Haryana, The Evaluation System, Gender Inequality in India, Constructivism in Education and Learning : A critical Review, Adjustment in Relation to Spiritual Intelligence and Life Satisfaction among Female Senior Secondary School Teachers, ICT in Teacher Training Programme, साइबर क्राइम की 21वीं शताब्दी में एक नई चुनौती एवं पठन में स्कीमा सिद्धान्त का अनुप्रयोग ।

We sincerely hope that these in-depth research papers, focusing on different issues, will further stimulate the academic research, and will help in developing an insight in the concerned areas. We are eagerly waiting for your critical response which we shall incorporate in the forthcoming issues.

We are greatly indebted to the paper writers who took keen interest and submitted their research papers on time. It is because of the sincere efforts of these people, the IPEM Journal for Innovations in Teacher Education is in your hand today.

We are grateful to our Patron Dr. B.S. Goel who provided all the moral and financial support to publish the Journal of CTE (Center for Teacher Education).

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# Teacher Education in Post Independent India: Affords to Bring Quality and Excellence Through Training and Professional Development

Sudershan Kumar Pathania\*

## Abstract

*Rabindra Nath Tagore rightly said, "A teacher can never truly teach unless he is still learning himself. A lamp can never light another lamp unless it continues to burn its own flame." Teacher education areas always feel the needs, requirements and demands of changes and improvements. Progress in contemporary societies motivates and at the same time forced the mankind to bring changes in education system which ultimately depends on the education of teacher i.e. teacher education. Teacher education does not depends on any single factor of development but is concerned with the intellectual, aesthetic, moral, physical, mental developments and above all professional developments and competencies of teachers. Innovations in teacher's professional developments played a vital role in developing teacher's professional competencies. If we have faith that teachers are not born then we can develop the faith in one aspect that it is possible to make teacher. The policies, reports, committees, drafts and commissions etc. at different times on teacher education had thrown light on the way that can help in the development of professional competencies of a teacher to make him/her a competitive and skilled teacher. The future of any nation depends on the type of education system and the educators. The teacher should know the art as well as science of teaching including "tricks of the trade". University Education Commission(1948), Secondary Education Commission(1953), The Committee on Higher Education for Rural Area(1954), Women's Education(1959), The Review Committee on Education(1960), Bhagwan Sahai Committee Report (1972), The National Curriculum Framework (NCF, 2005), National Curriculum Framework for Teacher Education (NCFTE, 2009) and Justice Verma Commission Report (2012) etc. after independence, throw light on the development of teacher's competencies in every aspect. This paper will highlight affords made by different commission and committees ...etc to bring improvements in teacher education for the development of professional competencies and skills of teachers in India after independence of India.*

**Keywords:** Teacher Education, Professional Development, Competencies, Innovations, Contemporary

## Introduction

The aim of education was to equip the learner with the worldly as well as spiritual knowledge. In the old age, the task of the teacher was to impart knowledge but in twenty first century

teacher has to act as Facilitator (NCFTE 2009). The Report of National Education Commission (1964-66) states: "The destiny of India is now being shaped in her classrooms." National Policy on Education (1986/92) states: "The status of teacher reflects the socio-cultural ethos of the

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society; it is said that no people can rise above the level of its teacher". R.P.Singh (1970) writes that 'One thing is however evident that there were certain Brahmin families where teaching was a hereditary profession....There is no evidence to hold the view that teacher training existed in the formal sense, known to us.'According to the International Encyclopedia of Teaching and Teacher education (1987), "Teacher education can be considered in three phases: Pre-service, Induction and In-service. The three phases are considered as parts of a continuous process.

The American Commission on Teacher Education rightly observes, "The quality of a nation depends upon the quality of its citizens. The quality of its citizens depends not exclusively, but in critical measure upon the quality of their education, the quality of their education depends more than upon any single factor, upon the quality of their teacher."

In his Call for Action for American Education in the 21st Century in 1996, Clinton indicated that: "Every community should have a talented and dedicated teacher in every classroom. We have enormous opportunity for ensuring teacher quality well into the 21st century if we recruit promising people into teaching and give them the highest quality preparation and training".

The Ministry of Education document "Challenge of Education: A Policy Perspective" (1985) has mentioned, Teacher performance is the most crucial input in the field of education. Whatever policies may be laid down, in the ultimate analysis these have to be implemented by teachers as much through their personal example as through teaching learning processes.

As stated by NCTE (1998) in Quality Concerns in Secondary Teacher Education, The teacher is the most important element in any educational program. It is the teacher who is mainly responsible for implementation of the educational process at any stage.

Chattopadhyaya Commission notes, "If school teacher are expected to bring about a revolution in Their approach of teaching.....that same revolution must precede and find a place in the college of Education.

## Concept of Teacher Education

Goods (1973) dictionary of education has defined teacher education as "all the formal and informal activities and experiences that help to qualify a person to assume the responsibilities as a member of the educational profession or to discharge his responsibilities most effectively".

According to Good (1941), teacher education not only refers to the total educative experiences which contribute to the preparation of a person for a teaching position in schools, but the term is more commonly employed to designate the program of courses and\ other experiences offered by an educational institute for the announced purpose of preparing persons for teaching and other educational service and for contributing to their growth in competency for such services.

De Landsheere (1987) emphasized that for enjoying the same social status and prestige as all those who eminently serve society, today's or tomorrows teachers must be professional, whose educational programme and level should be more and more comparable with the physician's education.

## Teacher Education After Independence

After Independence the University Education Commission (1948-49) was appointed under the chairmanship of Dr. Saravpalli Radhakrishnan. The Commission submitted its report in 1949.

- The Commission observed that obviously there was no difference in the theory papers but there was much difference in practice followed by the various teacher-training colleges.
- The number of supervised lessons varied

from ten to sixty and the type of practice teaching and student teaching varies from one to another.

- The Commission observed-that the training colleges had no basic orientation in the essentials.  
For improvement of teacher training, it suggested that
- The theory and practice should support each other
- Courses in the theory of education must be flexible and adaptable to local circumstances
- Trainees should be recruited from people having a firsthand experience of school teaching; that courses in the theory of education must be flexible and adaptable to local circumstances
- That original work by professors and lecturers in education should not suffer from isolation and lack of interuniversity planning.

To coordinate University Education in the country, the establishment of the University Grants Commission was also recommended.

### **Secondary Education Commission (1952-53)**

All India Commission for Secondary Education was set up in 1952 under the Chairpersonship of Dr. A. Lakshmanswamy Mudaliar .It analyzed the problems of teachers and the training programme in great depth. It gives importance to the teacher, his personal qualities, his educational qualifications, his professional training and the place he occupies in the school as well as in the community. Considering all these aspects the commission recommended three types of teacher training institutions viz.

- 1) Primary (Basic) Teacher Training
- 2) Secondary Teacher Training Institution and
- 3) Training Colleges.

It suggested two types of institutions:

- (i) for those who have taken the school leaving certificate, for whom the period of training be two years and should be under the control of a separate Board.
- (ii) for graduates, for whom the period of training be of one academic year but extended as a long-term programme to two academic years and should be recognized and officiated to the universities which should grant the degree It recommended training in co-curricular activities, refresher courses and research work for the M.Ed. degree. It recommended three years' teaching experience for M.Ed. Admission, after graduation in education.

### **Indian Education Commission (1964-66)**

The Government of India set up a Commission under the Chairmanship of Dr. Daulat Singh Kothari, to advice on the educational set-up. The Commission pointed out the weakness of the existing system and suggested ways to improve it.

It recommended that

- isolation of teachers' colleges with the universities, schools and the teachers' colleges themselves should be removed.
- laid stress on the importance of practice teaching and in-service education
- allocation of more funds for teacher preparation, better salaries and improved service conditions for teachers and their educators to attract competent people to the profession.
- introduction of integrated courses of general and professional education , subject orientation and improved methods of teaching
- Improvement of the quality of training institutions by attaching an experimental or a demonstrating school
- In-service education programmes for teachers that should be organized by Universities, training institutions and



teacher's organizations for teachers at all levels

As a result of the suggestions of the Education Commission, 1964-66, some changes were introduced in teacher education.

An M.A. degree in Education was introduced in some universities, such as Aligarh, Kurukshetra, Kanpur and some others. Some Universities introduced summer schools and correspondence courses to meet the backlog of untrained teachers and some States set-up. State Boards of Teacher Education. These changes were welcome steps in the field of teacher education and were expected to meet the needs in this field. Recognizing the importance of teachers in improving the quality of education, the Kothari commission (1964-66) recommended "securing a sufficient supply of high quality recruits to the teaching profession" by increasing the status of teachers, "providing them with the best possible professional preparation" and "creating satisfactory conditions of work"

### **National Policy on Education (1968)**

On the Status, Emoluments and Education of Teachers NPE 1968 stated that of all the factors which determine the quality of education and its contribution to national development, the teacher is undoubtedly the most important. (It is on his personal qualities and character, his educational qualifications and professional competence on that the success of all educational Endeavours must ultimately depend.) Teachers must, therefore, be accorded an honored place in society. Their emoluments and other service conditions should be adequate and satisfactory having regard to their qualifications and responsibilities. It recommended the academic freedom of teachers to pursue higher studies, publish independent work/ researches, to speak and write about significant national and international issues. It stressed on the need of teacher education, particularly in-service

education. The policy made recommendations regarding the service conditions of teachers, academic freedom of teachers and in service education.

The National Council for Teacher Education (NCTE, 1973)

In (1973), Government of India set-up the National Council for Teacher Education (NCTE). The NCTE drafted a curriculum for preparing teachers for the new 10+2 pattern and also defined the role and functions of the teacher in the emerging Indian Society.

The framework defined the role of teacher as

- A leader' inside and outside the classroom
- As an agent of social change and thereby help in achieving the goal of national development.

The framework also defined the objectives of teacher education as

- To develops the relationship with the community
- Emphasize and worked out the Socially Useful Productive Work (SUPW)

### **The D.P. Chattopadhyaya Committee Report (1983-85)**

This commission appointed by the Government of India in 1983 under the Chairmanship of Prof. Debi Prasad Chattopadhyaya, This committee made recommendation for the improvement in elementary and secondary teacher education. To meet the ever changing need, the major recommendations made by this report are as:

- Integration of general and professional education.
- Establishment of Department of Education in the existing colleges along with other courses and allows their students to choose teacher education
- Teacher education training programme for a secondary teacher should be five years after the completion of 10+2, to make the

programme relevant

- B.Ed programme should be extended to 220 days in a session with longer working hours.
- The teacher should develop a commitment and concern for society, a scientific attitude and the feeling for national unity and integrity.
- Integrated four year programme for both the secondary and elementary pre-service teacher education
- The quality improvement in teacher education should be as par as development in science and technology but without compromising the cultural identity of India
- Construction of curriculum as per Indian condition, development of special courses & programmes depend on school realities
- Professional development through orientations ,research ,higher study and academic condition

The commission recommended the selection of trainees on the basis of rating scales, objective tests, group discussion and personal interviews. For the professional preparation the commission recommended

- study of education as a discipline including sociology of education , educational psychology and educational philosophy
- practice teaching and its content cum-methodology, and
- learning a variety of skills related to the role of a teacher; including educational technology and preparation of software

### **National Policy on Education (1986)**

Teacher Education is a continuous process. Pre-service and in-service components of teacher education are inseparable. The new programmes of teacher-education will emphasize continuing education. District Institutes of Education and Training (DIET) will be established with the capability to organize pre-service and in-service courses for elementary school teachers and for the personnel working in non-formal and adult education. Selected

Secondary Teacher Training Colleges will be upgraded to complement the work of State Councils of Educational Research and Training (SCERT). The National Council of Teacher Education (NCTE) will be provided the necessary resources and capability to accredit institutions of teacher-education and provide guidance regarding curricula and methods. Networking arrangements will be created between institutions of teacher education and university departments of education.

### **Educational Developments (1992-2006)**

In 1992, the revised National Policy on Education also emphasized the functioning of teacher education institutions. There has been development in terms of both infrastructure and curriculum transaction as per the NPE and POA.

In 1998, the first curriculum framework for quality teacher education was developed by the Statutory NCTE.

In 2005, NCERT worked independently in evolving a teacher education curriculum framework.

In 2006, a joint curriculum framework brought out by NCTE and NCERT.

### **National Curriculum Framework for Teacher Education (NCFTE, 2009-10)**

In 2009, National Curriculum Framework for Teacher Education (NCFTE) is comprehensive and includes Context, Concerns and Vision of Teacher Education, Sample Redesigned Schemas of Current teacher Education Programmes, Evaluating the Developing Teacher, In-Service Education and Continuous Professional Development, and Preparing Teacher Educators. According to NCFTE the role of the teacher and a guiding philosophy of teacher education should involve:

- Teacher education should be open and

flexible with emphasis on changing contexts and empowerment of the teacher.

- Make teacher education liberal, humanistic and responsive to the demands of inclusive education.
- The principle of interactivity, variety, active learner involvement, participation and multi sensory learning should be followed
- The existence of diversity in students should be recognized and teacher should adjust accordingly.
- A variety of activities e.g. listening, reading, writing, reciting, singing, play acting, asking questions, playing with numbers, collecting specimens, drawing maps, pictures, observing, demonstrating, discussing, doing experiments, project work and field visits etc., can be provided for the achievement of several objectives .
- Teacher education should aim at to promote reflexive practice, to built capacities of teachers, knowledge, understanding and professional skills.

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# Heavy Bags? ----A Solution Through Mathematics

Mrs. Sadhana S. Hulyalkar\*

*Abstract- This paper explains how mathematical calculations help to create awareness and understand the seriousness of the problem of heavy school bags. It is an experimental research done with the help of students. The researcher has done the survey of weight of school bags and also different items students which students carry with them. For the same a group of 5 students from STD V TO VIII was guided to carry out the process. Comparison of weight of bags of all students from STD III to VIII was done. With the help of calculations, group has tried to create awareness about the same through exhibition, display boards and parents meetings. We have created awareness among the students and teachers by arranging the lectures of Doctors. Not only this with the help of students we have tried to create awareness about this issue in the society through the local radio channel. Also worked with the solutions for the same problem for these classes. It helped to reduce the weight of school bags. Thus it focuses on, how education helps to develop the problem solving attitude and solve the problems using technology as well as mathematics in the daily life right from the younger age.*

**Key words :** Heavy Bags, Mathematical Calculations

## Introduction

The main objective of education is for the welfare of the society. So these objectives are achieved through different subjects from the school age. These include Languages, mathematics, science, social science etc. So let's know why to teach these all subjects? This attitude has to be developed by every teacher through the teaching. It's nothing but the application of knowledge. [10] The objective of education is to develop the ability to apply the knowledge in solving problems and also develop the children to take the decision about the issues of which are affecting the individual, society as well as environment. Education should help to live the life happily. It should for the sustainable development. We all are aware of the problems of heavy bags of the students. The section 29 of ref. [1] states that

weight of school bags must be reduced to ease the burden on children. There are different opinions of the people about how much load a student should carry. Some people say that a student should not carry more than 10% of his weight. [2] This percentage of weight varies from 10% to 15%. According to doctors heavy loads creates certain health problems like neck pain, headache due to neck pain, cervical spondylitis, shoulder pain.[14][2][3][4][5][6] Recently we have done a survey of weight of school bag of std III to VIII students. It was found that apart from timetable the student carry 250g to 2 Kg extra weight. . [13] Suggest that weight of school bag for STD V to VII should be 4 kg. It was found that weight of some school bags were more than this. It's the issue which is directly affecting the health of children ultimately the society. I have tried to find the solution for the same. With the help of students

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the survey of weight of bags was done. (Students have taken weight of every item they carry in the bags). Students have compared the weight of their bags with their weight. They were guided to take the interviews of doctors to know about the diseases caused due to the same. Also we have tried to create awareness through the display boards, parents meetings and exhibitions [8 ]. The researcher has worked with the solutions for the problems. As there were calculations involved in the same, it was found that looking at the numbers students become more aware of the same problem and they followed the suggestion very seriously.

**Objective**

1. To reduce the weight of school bags.
2. To create awareness about the problem.

3. To make use of technology and mathematics for creating awareness of the problem.
4. To develop the problem solving approach.
5. To give life skill education.

**Research Method**

The actual work out of this project was divided into 3 parts.

3.1 Survey of weight of school bags and analysis- A group of 5 students from std V to VIII was selected for the same, the weighing machine was brought and group students were asked to take the weight of school bag of every student of std III to VIII. The class wise average weight is given below in the table. We compared the weight of school bag of our students with the standard weights suggested by government. [16]

Sr.No.	Std	Average weight of bag	Expected weight by rule
1	III	4.2 Kg	2.505 Kg
2	IV	5.3 Kg	2.830 Kg
3	V	5.8 Kg	3.195 Kg
4	VI	6.2 Kg	3.295 Kg
5	VII	6.1 Kg	3.785 Kg
6	VIII	6.4 Kg	4.325 Kg

The students of all respective classes were guided to calculate the percentage of weight of their bags with respect to their body weight. It was observed that the weight of their school bag was exceeding 10 % of their weight. We started checking school bag of every student. We found that there were many things which were there in

the bags apart from the time table. So we decided to take weight of each item. Class wise weight of such extra material was also taken. The same procedure is randomly done 5 to 6 times and the average of maximum and minimum weight carried by all classes is calculated and the result is expressed in the table as below.

Sr.No.	Name of item	Maximum weight	Minimum Weight
1	School Bag (empty )	1350 gram	210 gram
2	Rough Notebook	400 gram	-----
3	Pencil Box	350 gram	30 gram
4	Story book (Other than class library)	400 gram	-----
5	Extra Material	550 gram	-----
	Total	3050 gram	240 gram

$$\begin{aligned} \text{Weight can be reduced} &= 3050 \text{ gram} - 240 \text{ gram} \\ &= 2810 \text{ gram} \end{aligned}$$



It was found that weight of bag was increased due to following reasons-

1. 1.40% Students were not packing their bags as per the timetable
2. 2.25% students were using the dairy as a rough book
3. 3.10% students used to bring bat ball, picture cards, some other games to play during breaks
4. 4.60% students were using the school bag with weight more than 1 kg.
5. 35% students have very heavy pencil boxes with weight 350 gram
6. 6.5% students were having other heavy books other than textbooks.

7. 60% students of class VI to VIII were carrying the textbooks of maths, science, social science etc.

### 3.2 Awareness programme-

For students- Student were asked to calculate the percentage of their school bag with respect to their weight. They were asked to compare the same with the standard suggested by government. [2] We had a discussion on ways to reducing the weight. By looking at the calculations, it was found that nearly 2.8 kg can be reduced.

As per the difference again the percentage of weight of school bag was calculated by using the formula,

$$\% = \frac{\text{weight of school bag of student}}{\text{weight of student}} \times 100$$

Sr.No.	Std	Average % of weight of bag with body weight (before)	Average % of weight of bag with body weight (after following ways)
1	III	16.8 %	10.02 %
2	IV	17.6 %	11 %
3	V	16.1 %	10.5 %
4	VI	16.3 %	11.1%
5	VII	16.4 %	10 %
6	VIII	14.2 %	9.7 %

The same project was exhibited for all other class students to know about. The pictures showing same problem were displayed on the soft boards. To create awareness about the issue there was an exhibition of the posters showing seriousness about the issue.

Interactions with Doctors- To know the ill effects of carrying heavy school bags, lectures of doctors were arranged. Students have taken interviews of doctors. The group discussed all the problems, suggestions given by doctors in the classes. Students were made aware about the diseases like spondylitis, neck pain, rounding of shoulders, shoulder pain, spinal deformities like scoliosis, RSI etc. [2], [3], [4], [5], [6], [7]

**For teachers** - Teachers were guided to plan their teaching to avoid the burden of school bags. Certain activities were suggested. [10], [11]. It was suggested that the teachers should not force the students to carry the textbooks of Maths, science, social science and computer. Language teachers were guided to inform the students well in advance about bringing the particular text books as there are more than two textbooks for certain languages. The Notebook for copywriting should not be asked to be carried everyday; Instead should be told to bring only once a week.

**For parents** - Meetings were arranged for the parents also through the PTA newsletter of our school. The awareness was created. During parents meetings, parents were requested to



check the school bag of their ward frequently and also to purchase the school bag or other material of light weight.

For society- Through the programme "G Ganitacha" by Vasundhara Vahilni, Barmati, we have tried to create awareness about the issue.

### 3.3 Suggestions-

1. Use the school bag which is made of light weight materials.
2. Students should carry some pages for rough pages instead of any notebook or diary.
3. Avoid using fancy pencil boxes instead they can use simple pouch for carrying geometrical materials.
4. Students should not carry colour pens or other colouring materials daily.
5. Pack the school bag according to the timetable. Surprise checking of the bag will be done by the class teacher.
6. Primary students use term book which contains all subjects. Such books were collected from the students at the end of the year and used for the next year. Such books were kept in the class cupboard itself and during language periods the teacher used to distribute the books one on each bench
7. All the notebooks should be of 100 pages with soft binding. [2]
8. More stress on listening and reading, and speaking skills rather than writing in primary classes.
9. Teachers were suggested to plan the activities for home work, in the class so that the students do not have much load of writing. [11], [12],
10. Drinking water facility is available in the school so students need not to carry water bottle with them. Apart from these the students were guided to take the interview of doctors for the same

### Results

1. Students became aware about the problem.
2. It was found that after observing the actual

calculation differences in the weight, the problems caused by heavy bags, students started following the ways suggested.

3. Parents also became aware about the problems and they allowed the students to keep their textbook, other material needed for the club in the school.
4. The weight of school bag was reduced.
5. Students started packing their bags properly and as per the time table as every class a bag monitor was appointed who was given responsibility of checking the school bags.
6. Students understood that the scientific knowledge can help to solve their problems.
7. We could make use of technology for creating awareness in the society.

### Discussion and Conclusion-

It was found that students became aware about the problems. Even I get feedback from parents that children are taking initiative to avoid the load of school bags and were doing estimation to the weight of school bags and other items while purchasing. Students agreed that mathematical calculation helped them to understand the seriousness of the problem, when we discussed about the different types of school bags, pencil boxes etc and their cost, students understood that this method would help them not only to reduce the weight of bags but also to save money. The students were also thinking other benefits of purchasing the school items. Some of them very excited to tell how they saved money. As a teacher I used to keep surprise check on this and motivate the students to use the light weighted things. So while teaching maths I could develop the scientific attitude through experimenting and verifying the results. It was also found that we can make use of available technology for achieving the objectives of education.

### Further Scope

1. From the next academic year, we will be using 100 pages soft binding notebooks for

- primary section and 200 pages soft binding books for secondary section.
2. NCERT textbooks will be used for all classes.[15]
  3. Timetable will be modified such that students need not to carry many notebooks and textbooks.
  4. Students will be provided the material needed for the activities form the tusk shop run by school.

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# Attitude of School Teachers Towards Inclusive Education

Prof. Vinita Dhawan\*

## Abstract

*Inclusive education brings diverse learners under one roof regardless of their strength or weakness in any area to enhance learning with a purpose to maximise the strength of all the learners. The educational approach for 21st century ensures that all students gain access to knowledge, skill and information that will prepare them to contribute to the nation. To meet this challenging job to accommodate students with increasingly diverse background and abilities with other learners, there is a need to involve the teachers, parents and community members. However, teachers' role in inclusive education is crucial as an immediate executioner and they establish a relationship between educational ends and means. Teachers for inclusion need to bear a positive orientation, flexibility, capacity for innovation and ability for adequate application. The present study attempted to find out the attitude of school teachers towards inclusive education. The study involved the descriptive survey method. A sample of 80 teachers was randomly selected from four schools. The data was collected through Teacher Aptitude Scale towards Inclusive Education. The data collected was analysed by calculating mean and using t-test. The findings of the study revealed no significant difference in the attitude of teachers of different level of school (primary and secondary) and type of school (private and government).*

**Key words:** Attitude, Inclusive education.

## Introduction

All children must have the same opportunity to be a child, to play together, to lunch together, to enjoy company of friends and to learn with other children in the class. A common classroom for the people of all different sizes, shapes, colours and abilities with equal access to quality education is a set up of inclusive education. Inclusive education encourages growth and values diversity. It creates a welcoming environment for all. Thomas and Loxley (2007) were of view that the essence of thinking of inclusion is in the acceptance of diversity and striving for all members in a system. Educating children with special needs requires unique instructional methods, materials, learning aids and

equipments to meet the need of children with disabilities. A teacher uses all these depending upon the ability of a child. In fact majority of teachers work with youths with mild to moderate learning disabilities. They only use the general education curriculum and modify it for each child's individual needs. The attitude of teachers should help to develop individualized education programme (IEP) for each special education student. So the teacher's attitude towards those children must involve to educate child to the maximum extent and bringing the ancillary services to the child with disability and not to let him feel isolated in the educational settings. The behaviour of teacher towards inclusion is a complex task and varies from teacher to teacher and school to school. It should

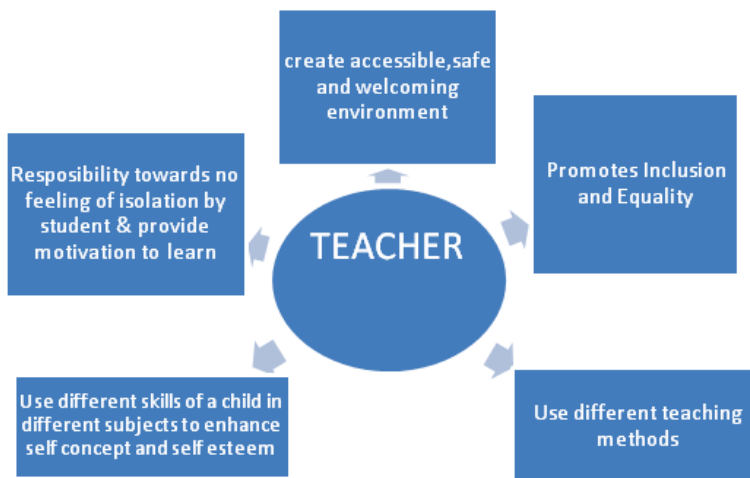
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be a prime concern to improve the attitude of classroom teachers towards inclusion. Attitudes are essential in the success of educating students with disabilities in regular education classrooms, pre-service programs should emphasize and concentrate on enhancing teachers attitudes towards inclusion (Kauffmann, Hallahan, & Ford 1981).

People with disabilities do not get enough consideration and it is the young children who suffer most since they are at the critical period of life. It is a great challenge before the educator providing for the needs of special education students. He has to understand the significant discrepancy in a child and ensure the accommodation and modification related to a support process that enable a student to accomplish a task and instructional outcomes; a change or decrease in the course content for him. The children demand more of a teacher and

in inclusive class depends when they teach basic skills within the context of meaningful lessons; all students can achieve higher-level learning. Such lessons stimulate critical thinking and motivate students to make personal connections with the material. However, with adequate resources, training, and other supports necessary to teach students with disabilities in their classrooms, teachers might be more willing to adapt the curriculum for their students, and to be more patient and flexible in providing their students with the extra help required (Silverman, 2007)

A teacher has a vital role to play in shaping and modelling attitudes of other persons towards them. Inclusive education can only be realised when a teacher is aware of the nature of the situation and committed to work for it. Positive attitude of teachers encourage the inclusion of students with disability in regular classroom. Their attitude is influenced by their previous



patience. So there is a need of positive attitude towards the practice of inclusion and towards the students in the particular setting. The attitude portrayed by a teacher also has a great impact on the development of a child learning in inclusion set up. Teachers become true educators with their acknowledgment, appreciation, and the respect of students' differences. The success of a teacher

experience, previous knowledge i.e. training in the field and newly acquired knowledge i.e. professional development programme. A negative perception of teachers towards inclusive education may become an obstacle in the progress of inclusion programme. Hammond and Ingalls (2003) found that general education teacher's attitude toward inclusion is one of the most important factors in determining the

success of inclusive programs. Biddle (2006) reported that both teacher attitudes and beliefs toward inclusion can significantly influence the learning environment and the use of appropriate supports and accommodations for students with disabilities. A negative attitude of teachers toward inclusion is also directly linked to less frequent use of effective classroom accommodations for students with disabilities in the inclusive setting. Regular education teachers have an important role when it comes to inclusion. The regular education teacher may have issues or concerns regarding the student with a disability being in their classroom. These issues need to be addressed so the student can have a successful classroom learning experience.

Inclusion is a process that empowers a person with disability. Inclusion works best when there is a fundamental change in the approach of classroom management. The classroom teacher plays a key role to provide effective education to all children including children with disability. The teacher with an approach that every child is special in one way or the other, pays attention to the individual capabilities of the children irrespective to categorize them on the basis of colour, creed, intellect and disability etc. The teacher uses the abilities of the students for constructive purposes and accumulates the collective strength of the classroom. The teacher promote the peer group learning in an inclusive setup to make the learning faster and to make the entire classroom environment itself to develop the appropriate concepts. When teacher encourages learning by doing, disadvantaged children who require concrete experiences are benefitted much. A true teacher sets realistic goals for the students keeping in mind that each student has his own limit. The teacher can make his classroom a conducive place for learning by adapting a multi-sensory approach in learning. He will identify the learning preferences- visual, auditory or tactile, of the students and facilitate learning through small groups. An effective teacher supervises the learning activities and help in rectifying the mistakes of students instead

to find fault with the work of students.

## Objectives

1. To study the attitude of school teachers towards inclusive education.
2. To study the difference in attitude towards inclusive education among teachers of primary and secondary school level.
3. To study the difference in attitude towards inclusive education among teachers of private and government school.

## Hypothesis

1. There is no significant difference in attitude towards inclusive education among primary and secondary school teachers.
2. There is no significant difference attitude towards inclusive education among private and Government school teachers.

## Research Method

The present study was a Descriptive Research as information was gathered from a sample of school teachers at primary and secondary level of private and government schools of Faridabad to describe the attitude of teachers towards inclusive education.

**SAMPLE AND SAMPLING PROCEDURE:** The sample consisted of 80 teachers which included an equal number working at primary and secondary level and an equal number working in private and government schools. The sample was selected randomly from the four schools of district Faridabad. The schools were however chosen through purposive sampling.

**TOOL USED:** The tool used for the present study was Teacher's Attitude Scale towards Inclusive Education (TASTIE) by Dr. Vishal Sood and Dr. Arti Jain. The tool comprises of 47 statements (29 favourable and 18 unfavourable statements) on a three point scale.



**DATA ANALYSIS:** In the present study the data was analysed by mean, and t-test.

## Findings

The data was analysed keeping the objectives in mind and revealed the following about the attitude of teachers towards inclusive education. The findings have been encapsulated in under several headings.

**1. Attitude of teachers towards inclusive education** – School teachers are expected to have different types of attitude towards inclusive education depending on the work responsibilities, school set up, professional training, level of education, and working hours among others. Teachers who have favourable attitudes toward inclusion generally believe that

The above table shows that from the total sample, only 7.5% of school teachers have most favourable attitude and 28.75% of total teachers have above average favourable attitude towards inclusive education in schools. The maximum number of teachers i.e. 61.25% of total teachers have moderate attitude towards the children with special needs in schools. The percentage of teachers who showed below average unfavourable attitude towards such type of education was very less; they formed only 2.5% part of the sample. Another noteworthy feature was that there were no teachers who possessed an extremely favourable attitude. However, there were no teachers who had most unfavourable or extremely unfavourable attitude towards inclusive education. This was a consolatory sign which showed that teachers do

**Table-1: Attitude of teachers towards inclusive education**

S. No.	Range of Raw scores	Level of attitude	No. of teachers
1.	127 and above	Extremely favourable	0
2.	116-126	Most favourable	06
3.	105-115	Above average favourable	23
4.	90-104	Moderate attitude	49
5.	80-89	Below average unfavourable	02
6.	69-79	Most unfavourable	0
7.	68 and below	Extremely unfavourable	0

N=80

students with disabilities belong in general education classrooms, that they can learn there, and that the teachers have confidence in their abilities to teach students with disabilities (Berry, 2010). Those with less favourable attitudes toward inclusion tend to believe that inclusion makes too many demands on the teacher or that students with disabilities are better served in special education placements where they can receive individual attention (Berry, 2010). The researcher found in the present study that teachers bear different levels of attitude towards inclusive education. The following table would give more in-depth analysis of the kind of attitudes teachers hold for inclusive education.

not held unfavourable attitudes towards inclusive education which is expected to lead to a better behaviour of the teachers with children with special needs learning in the same environment with other children. Silverman (2007) placed high importance on the need for teachers to develop positive attitudes toward inclusion. And more recently, Berry (2010) maintained that in effective inclusion teachers maintain positive attitudes toward inclusion including a willingness to take responsibility for the learning of their students.

**2. Difference in attitude of teachers towards inclusive education among primary and secondary school teachers** – Teachers in schools



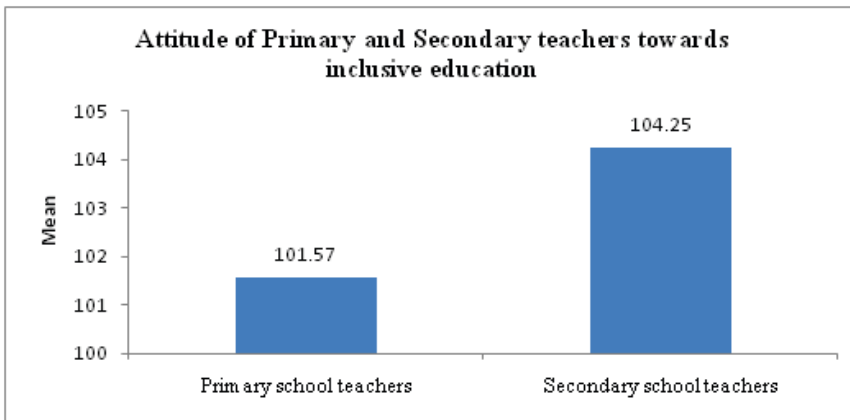
are working at different levels – primary and secondary. They have their own working conditions and face different kinds of challenges in the classrooms. The researcher felt that it is essential to find out difference, if any, in attitude

**3. Difference in attitude of teachers towards inclusive education among private and government school teachers-** Teachers working in different types of school like private and government have their own attitude towards their profession owing to different reasons and working style. So in the researcher opinion it

**Table-2: Attitude of teachers towards inclusive education among primary and secondary school teachers-**

Group	N	Mean	Mean Diff.	t-ratio	t-value at 0.05level of significance	t-value at 0.01level of significance	Result
Primary	40	101.57	2.65	0.14	1.99	2.64	Not Significant
Secondary	40	104.25					

The table shows that the t-value is 0.14



School Level.

Fig. 1

towards inclusive education of teachers, working at primary and secondary school level. t-value was calculated for finding out the difference in attitude of primary and secondary school teachers towards inclusive education.

which is not significant at 0.05 level of significance and also at 0.01 level of significance. Thus, the hypothesis is accepted that there is no significant difference in attitude towards inclusive education of teachers of working at primary and secondary

becomes necessary to find the difference in the attitude of teachers working in different sectors private and government. t-value was calculated for finding out the difference in attitude of government and private school teachers towards inclusive education.

The table shows that the obtained t-value is 0.086 which is not significant at 0.05 level of significance and also at 0.01 level of significance. The hypothesis is thus accepted that there is no significant difference in the government and private school teachers towards inclusive education.

**Table-3: Attitude of teachers towards inclusive education among private and government school teachers-**

Group	N	Mean	Mean Diff.	t-ratio	t-value at 0.05level of significance	t-value at 0.01level of significance	Result
Government	40	101.725	2.9	0.086	1.99	2.64	Not Significant
Private	40	104.625					

Hammond and Ingalls (2003) surveyed general education elementary school teachers' attitudes toward the inclusion of students with disabilities. Their study found that many teachers hold

system level support and classroom strategies. The system level practices include connection with other organisation best practices which has already restructured to meet the needs of their

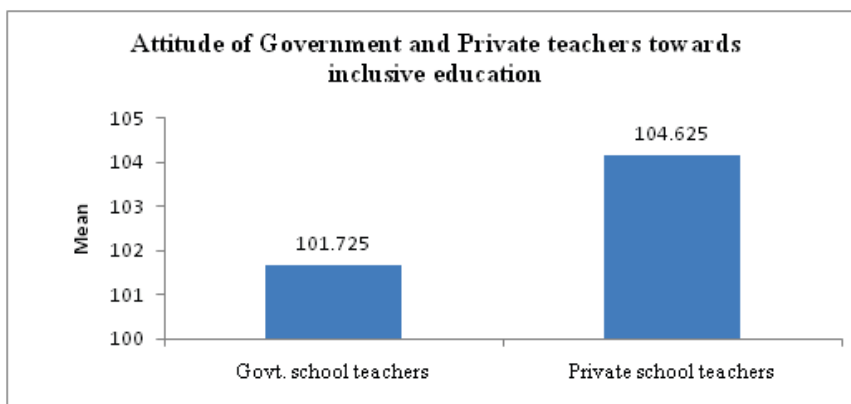


Fig.2

negative attitudes toward inclusion because of: (a) a lack of commitment of school personnel and administration, (b) disagreement with the benefits of inclusion, (c) inadequate levels of collaboration and support from fellow teachers, (d) insufficient training for providing accommodations and services to students with disabilities, and (e) teachers feeling unprepared to handle students with disabilities in their classrooms.

## Conclusion

An attitude held by teachers regarding inclusion is that it will create more responsibility and work for them, and it will also take away time from all students within the classroom (Hammond &

Ingalls, 2003). When teachers feel this way, they become frustrated and harbour negative feelings toward inclusive programs. Teachers today already feel overwhelmed with the day-to-day demands of a busy classroom. They feel including students with disabilities will increase their work responsibilities. The successful inclusion of disabled students demands the favourable and positive attitude of general education teachers towards these students into the classroom. The general education teacher should be provided training and supportive services through a collaborative consultant and designated time to meet willingness to participate in collaborative interaction, only then they can come at par with special teachers. Making inclusive education work requires

increasingly diverse student populations in regular education; visionary leadership, that recognise the provision of extra planning, fiscal, human, technological and organisational resources to motivate experimentation with new practices; redefined roles and responsibilities, facilitating a single job description for all professional educators that clearly articulate as expected job functions collaboration and shared responsibility for educating all children. For inclusive education to work, educators must become effective and efficient team members. The classroom strategies should be based on current theories of learning such as multiple intelligences and constructivist learning and teaching practices such as partner learning, project and activity based learning, use of technology for communication and access to the general education curriculum. Cooperative learning and peer-based interactions have been advocated by a number of researchers in the education of students with disabilities in inclusive settings. The ideal system of inclusion provides that the general education system itself should make education of children with disabilities as its integral part. It implies that the general classroom teacher should be equipped with skills to address the educational needs of these children with minimum or no assistance of special teachers. In the ideal inclusive setting, the general classroom teacher provides essential services of planning instructional strategies for children with disabilities, teaching content to them, general discipline in classroom, checking home assignment, conducting examination, evaluation, tracking progress of the child, consulting with special teachers, interacting with parents of disabled children. The presence of a new vision, where interacting with students with disabilities becomes more comfortable, shows promise for ways in which inclusive teaching can be transformed and various seminars and conferences should also be organised to improve their knowledge about ways of practising and accepting inclusion for better tomorrow.

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# “Internet Addiction with Mental Health among Adolescents”

Dr. Shubhangi\*

## Abstract

*The present study is undertaken to study mental health of adolescents those who are using internet. A sample of 60 junior college students who are using internet are selected. In this research internet addiction test of Dr. Kemberly young was used with mental health test of Anadkumar and Giridhar P. Thakur. There is a significant correlation is found between internet addiction and mental health.*

## Introduction

The Internet itself is a neutral device originally designed to facilitate research among academic and military agencies. How some people have come to use this medium, however, has created a stir among the mental health community by great discussion of internet addiction.

Addictive use of the internet is a new phenomenon many practitioners are unaware of and subsequently unprepared to treat. Some therapists are unfamiliar with the internet making its seduction difficult to understand other times its impact on the individuals life is minimized. The purpose of this chapter is enable clinicians to better detect and treat internet addiction first focus will be on the complications of diagnosis of internet addiction. Second, the negative consequences of such internet abuse are explored. Third, how to properly assess and identify triggers causing the onset of pathological internet use are discussed. Fourth, a number of recovery strategies are presented. Lastly, since Internet addiction is an emergent disorder, implications for future practice are presented.

The internet and mobile technology are

increasingly important to the educational and social lives of children, and are becoming a part of children identity. As one young person said to child-net at one of its recent focus group meetings, “Take away my mobile phone and you take away a part of me.”

With the advent of broadband and mobile access to the internet giving young people access to the internet any place and at any time, thus entertainment, interaction and communication, there is a real risk that children can become so immersed in their online world that it can seem to take over their lives. It is easy to see why some children and young people love spending many hours pursuing their interests, playing games, finding information and communicating with friends (strangers) online. However, when this use becomes obsessive and at expense of other aspects of a young person’s life, this use of internet could even be classified as internet addiction.

## Internet Addiction

Internet addiction disorder, compulsive Internet use, computer Addiction, Internet dependence and Problematic internet use – all these are

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essentially terms that have been applied to those that spend excessive amounts of time online at the expense of and to the detriment of other aspects of their lives. The obsessive behavior takes the form of particular activities, and might include any or all of the following;

- Relationships: spending excessive amounts of time starting and maintaining online friendships in chat rooms, which replace real-life friends and family.
- Money: compulsively gambling online, trading online, and partaking in online auctions.
- Information searching: compulsive web surfing or database searches.
- Gaming: obsessive computer game playing, including multi-user games.
- Sex: Addiction to adult chatrooms, cyber sex or pornography on the Internet.

### **The Problems Associated With Internet Addiction**

- Skipping meals, losing sleep and time for other things.
- Rearranging daily routines and neglecting studies or other activities and responsibilities to spend more time online.
- This has the potential to affect school performance and relationships with friends or family.
- There may be financial problems depending on the nature of the communication e.g. paying for content, gambling and subscriptions recharge etc.
- There are also physical problems associated with bad diet, lack of exercise and also with extended computer use (for example dry eyes, carpal Tunnel syndrome, and backache.

### **Indicators of too much internet use**

- Less investment in relationships with friends and interruption of social relationships.
- Feeling empty, depressed and irritable when

not at the computer.

- Suffering withdrawal symptoms when without access or when reducing internet use – these –symptoms include anxiety, restlessness, depression, even trembling hands.
- Craving more and more time at the computer.
- Deception regarding time spent online.
- Denial of the seriousness of the problems.
- Lack of sleep and excess fatigue
- Declining school results
- Withdrawal from school social activities and events.
- Rationalizing that what you learn on the Net is superior to school

### **Mental Health**

Mental health describes a level of psychological wellbeing or absence of a mental disorder. From the perspective of “Positive Psychology” or “Holism”; mental health may include an individual’s ability to enjoy life and create a balance between life activities and efforts to achieve psychological resilience. Mental health can also be defined as signifying a successful adaptation to a range of demands. There are different types of mental health problems, some of which are common such as depression and anxiety disorder

### **Relation between Mental Health and Internet Addiction**

The internet is an increasingly important source of mental health related issues. Problems related to mental health are less investment in relationship with friends and interruption of social relationship. The feel empty, depressed and irritable when not use computer, has an anxiety, restlessness, depression, even trembling of hands, craving more and more time at computer, denial of seriousness of problems, lack of sleep and excess fatigue, declining school results, withdrawal from school, social activities and events.



## Adolescence

Adolescence or teenage is a confused period in one's life. This is a period of rosy dreams, adventure, love and romance. The teenager strives for independence. He dislikes parental authority, becomes fully aware of social value and norms. There is rapid physical growth. So they can easily get disturb.

## Review of literature

Kubey, Lavin and Barrows(2001) surveyed 576 students in Rutgers university. This survey included 43- multiple choice items regarding internet usage study habits, academic performance and personality. Internet dependency was measured with five point Likert- scale item. Dependents were four times more likely than non-dependents to report academic impairment due to their internet use.

Shapira, Lessig, Goldsmith Szabo, Lazohtz and Goldstein(2003) proposed a revised classification & diagnostic criteria for problematic internet use. Black, Belsare & Schlosser (1999) pointed out that internet addiction disorder (IAD) seemed to have high co-morbidity with other psychiatric disorders.

Black et al (1999) attempting the examine demographic, clinical features and psychiatric co-morbidity in individuals reporting compulsive computer use. They do anti-social behavior, anxiety, shyness psychiatric disorders.

Egger & Rautenberg formed questionnaires for internet users to study emotion and experience related to internet. This questionnaires was solved by 454 individuals: in that 70% individuals were internet addicted. They felt they are drawn towards internet. They felt stressful when they are restricted about use of internet. They felt frustrated and guilty.

In research, Berner formed 32 questions for internet addicted individuals and G D.S.M.IV related to substance abused. In those internet

addicted persons, he found frustration, stress etc.

## Objective

To study the relation of internet addiction with mental health among adolescents.

## Hypothesis

Internet addiction will be significantly associated with mental health of the adolescents.

## Method

A sample of 30 male and 30 female students incorporated randomly for the study. All subjects registered their names in 11th and 12th grade class of various colleges in Kolhapur city.

## Tools

For this research 2 measures are used.

### 1. Internet addiction Test

Internet addiction test is developed by Dr. Kemberly Young. It has 20 questions with 5 options namely; a) Rarely b) Occasionally c) Frequently d) Often e) Always. Shave to select the option among them.

### 2. Mental Health Test

Mental health test is constructed by Anandkumar and Giridhar Thakur. It has 50 statements with has 5 options. They are a) Very true. b) True c)Uncertain. d) False and e) Very False. There are some statements which are positive and having marks from 5 to 1. Also there are negative statements, which has marks from 1 to 5. Both these tests are in Marathi.

## Procedure

For this research, to know the level of Internet addiction and mental health in adolscents. Internet addiction test of Dr. Klimberly Young and Mental health test of Anandkumar and Giridhar P. Thakur are used.

For these tests a group of students studying in 11th and 12th grade of science faculty in English medium college at Kolhapur were selected.

30 boys and 30 girls were selected. Those testees were selected whom are using internet. When they understood, how to solve the test; then test were given individually to get solve.

**Limitations**

1. For this research sample is in small quantity and the research is for only adolescent group.
2. In the present study only self reporting technique was used.

**Table 1 Shows the mean, SDs and correlations between internet addiction and mental health**

Variables	n	Mean	SD	r	Significance
Internet addiction	60	37.15	18.19	0.39	Significant at 0.01 level
Mental health	60	123.25	21.57		

**Results and statistical interpretation of data:**

From the solved test responses collected with the help of scores which were arranged in the table and following results were obtained. In adolescent internet addiction test mean was 37.15 and SD was 18.19. From this the percentage of internet addiction was high. In Mental health test, mean was 123.25 and SD was 21.57. From this there was disturbance in mental health. It is found that internet addiction is significantly and positively associated with mental health ( $r=.39^{**}$ ). When discussed with the students those who were using internet; we got the following information. They used computers, internet and mobiles for getting information, reducing anxiety, stress, frustrations and weaknesses. But after some days it become there necessity and they have to use these tools. So individuals became addicted & that disturbs mental health of persons.

**Conclusion**

There is a significant correlation is found between internet addiction and mental health.

**Recommendations**

1. For this research both male & female students are included, but separate study of this can be studied such as with the help of sex differences, mental health and internet addiction.
2. For more sound analysis we can support the technique of interview, case study with self report measure.

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# A Study on Academic Stress among B.T.C. Students of Rohtak District of Haryana

Dr. Garima Chaudhary\*

## Abstract

*Academic stress among students have long been researched by several investigators and they have identified stressors as too many assignments, competition with other students, failures, lack of pocket money (Fairbrother and Warn, 2003) and poor relationships with other students or lecturers and , family problems at home. Institutional level stresses are overcrowded lecture halls (Ongori, 2007; Awino & Agolla, 2008), semester system, and inadequate resources to perform academic work. Stress and its manifestations, such as anxiety, depression, and burnout, have always were as a common problem among people in different professions and occupations. In the last few decades, alarm has already been provoked by the proliferation of books, research reports, popular articles and the growing number of organized workshops, aiming to teach people how to cope with this phenomenon. The purpose of the study is to find out the level of academic stress among B.T.C. Students. The present study consists of 200 B.T.C. Students studying in Government and private teacher-training colleges situated in Rohtak District of Haryana, India. The sample was selected by using simple random sampling technique. The present study reveals that the male student's academic stress is higher than female students. The urban student's academic stress is higher than rural student. The Government school student's academic stress is less than private school student.*

**Key Words:** *Academic stress, B.T.C. Students, Male/Female, Urban/Rural, Government /Private.*

## Introduction

Stress is viewed as a negative emotional, cognitive, behavioural and physiological process that occurs as a person tries to adjust to or deal with stressors (Bernstein, et al 2013). Stressors are defined as circumstances that disrupt, or threaten to disrupt, individuals daily functioning and cause people to make adjustments (Auerbach & Grambling 2008). The following list contains some of the common warning signs and symptoms of stress. The more signs and symptoms one may notice in himself, the closer he may be to stress overload: Inability to concentrate, moodiness, irritability or short

tempered poor judgment, agitation, inability to relax, seeing only the negative, feeling overwhelmed, anxious or racing thoughts, sense of loneliness and isolation, constant worrying, depression or general unhappiness are the general symptoms. The Physical Symptoms are: Aches and pains, eating more or less, diarrhea or constipation, sleeping too much or too little, nausea, dizziness, isolating himself from others, chest pain, rapid heartbeat, neglecting responsibilities, frequent colds, using alcohol, cigarettes, or drugs to relax, nervous habits (e.g. nail biting, rearing, preening and other stereotypes). The signs and symptoms of stress

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can also be caused by other psychological and medical problem.

The Important sources of stress are the Frustration, Conflict, Pressure and Anxiety. Frustration is a feeling of discomfort, disappointment or insecurity aroused by blocking of gratification or by the existence unresolved problems. Children and adults with developed disabilities often experience frustration in academic, vocational and social situation because they are frequently unable to meet the expectations and desires of others. Conflict is often sparked by a clash of interests, values, actions or directions. It refers to the existence of that clash. Psychologically, a conflict exists when the reduction of one motivating stimulus involves an increase in another, and that drives us to suffer in the future unless it is managed constructively. When associated with violence, destruction and killing, the conflict is no longer a healthy part of living. Pressure is the application of continuous force by one body on another which is emotionally touching. Pressure is a competing or constraining influence on the mind or will. A limited pressure is good as it drives one to work in the desired direction. But a lot of pressure of anything is harmful for us as it causes extreme stress. Anxiety is the conditioned (learned) fear for a non-fearful object. A normal level of anxiety has a motivating property for the desired action, such as anxiety for passing the examination. In post-optimum quantity, it causes muscular freezing due to emotional confusion and results into non-activity.

### **Effects of Stress**

It has been argued that an individual can have possibly anxious thoughts, difficulty to concentrate or remember because of being stressed. Stress can lead also to change in people's behaviours, such as nail biting, heavy breathing, teeth clenching and hand wringing. When people are stressed, they may feel cold hands and feet, butterflies in stomach, and sometimes-increased heart rate, which all are

regarded as common physiological effects of stress, which can be connected to emotion of anxiety (Auerbach & Gramling, 2008). Physical and psychological responses to stress generally occur together, principally when stressors become more intense. However, one category of stress responses can influence other responses. For instance, mild chest pain may lead to the psychological stress response of worrying about getting a heart attack. Physical responses can be when a person escapes from a terrible accident or some other frightening events, he or she will experience rapid breathing, increased heart beating, sweating, and even shaking little later. These reactions are part of a general pattern known as the fight-or-flight syndrome. The psychological responses to stress can appear as changes in emotions, thoughts (cognition), and behaviours (Bernstein et al., 2013).

### **Academic Stress**

The definition of academic stress is the anxiety and stress that comes from schooling and education. There is often a lot of pressure that comes along with pursuing a degree and one's education. There is studying, homework, tests, labs, reading, and quizzes. Academic stressors include the student's perception of the extensive knowledge base required and the perception of an inadequate time to develop it (Carveth et al, 2006).

### **Review of Related Studies**

Sibnath Deb, Esben Strodl and Jiandong Sun (2014) studied on stress among private school students in India. The purpose of this study was to examine the prevalence of academic stress and exam anxiety among private school students in India as well as the associations with socio-economic and study-related factors. Participants were 400 adolescent students (52 percent male) from five private schools in Kolkata Findings revealed that 35 and 37 percent reported high or very high levels of academic stress and exam anxiety respectively. All students reported high

levels of academic stress, but those who had lower grades reported higher levels of stress than those with higher grades. Marwan Zaid Bataineh (2013) studied on Academic stress among undergraduate students: the case of education faculty at King Saud University. This study investigated the academic stressors experienced by the students at university. A total sample of 232 subjects participated in this study. Data were collected through self-administered questionnaire which was randomly distributed to the students during lecture time. Data obtained were analyzed using descriptive statistics, correlation, and analysis of variance (ANOVA). The result showed that academic overloads, course awkward, inadequate time to study, workload every semester, exams awkward, low motivation, and high family expectations were drive moderately stress among students. It was also found that fear of failure is the major source of stress among undergraduate students. Rajasekar (2013) studied on Impact of academic stress among the management students of AMET University. The study examined the impact of academic stress among the management students. Stress management encompasses techniques to equip a person with effective coping mechanisms for dealing with psychological stress. Students have different expectations, goals and values that they want to fulfill, which is only possible if they are integrated with that of the institution. Scholars (Ornelas & Kleiner,2003; Verment & Steesma,2005; Ongori,2007; Topper,2007; Ongorfi & Agolla,2008; Agolla,2004) for instance have notified the symptoms and the causes of stress in work environments as sitting for a long period of time, poor work performance, poor interpersonal relationships, inadequate and lack of resources, inadequate time to perform particular assignment, poor working conditions, overcrowded work stations, excessive paperwork, and many others. Researchers (Ongori & Agolla,2008; ; Agolla,2004) have long identified stress symptoms as lack of energy, taking over the counter medication, high blood pressure, feeling depressed, increase in appetite, trouble in concentrating, restlessness, tensions

and anxiety among others.

## Need and Significance of the Study

In today's highly competitive world, students face various academic problems including exam stress, disinterest in attending classes and inability to understand the subject. Academic stress is the feeling of anxiety or apprehension over one's performance in the academic activities. It can lead to students being unable to perform to the best of their abilities in examinations. In Teacher-Training colleges there is a range of academic pressure feel, derived from a need for perfection, worry over grades, parental pressure, competition, sports, or a tough class load. The nervous breakdowns, panic attacks, burnouts, and depression are also apparent in many BTC students. The same situation is not always stressful for all people, and all people do not undergo the same feelings or off-putting thoughts when stressed. Students of Teacher-Training colleges were considered to be the future pillars who take the responsibilities to take our country to the next phase they should be in better way. To know this, the investigator decided to analysis the academic stress among BTC students of Teacher-Training colleges.

**STATEMENT OF THE PROBLEM** The problem under taken by the investigator is stated as "A Study on Academic Stress among B.T.C. Students of Rohtak District of Haryana".

**OBJECTIVES OF THE STUDY** The investigator of the present study framed the following objectives:

1. To find out the level of academic stress among B.T.C. Students of Rohtak District of Haryana, India.
2. To find out whether there is significant difference between the following sub samples with respect to academic stress.
  - a) Gender [Male / Female]
  - b) Locality [Rural / Urban]
  - c) Management [Government / Private]



## Hypotheses Of The Study

1. The investigator of the present study framed the following hypotheses:
2. There is significant mean difference between male and female BTC students with respect to academic stress.
3. There is significant mean difference between rural and urban area BTC students with respect to academic stress.
4. There is significant mean difference between Government and private school BTC students with respect to academic stress.

## Variables

Independent variables:

- a) Gender [Male / Female]
  - b) Locality [Rural / Urban]
  - c) Management [Government / Private]
- Dependent variable: Academic stress of BTC students.

## The Method

In the present study, the investigator applied normative survey as a method. The normative survey method studies, describes and interprets what exists at present.

## Sample

A sample is a small proportion of a population selected for observation and analysis. By observing the characteristics of the sample, one can make certain inferences about the characteristics of the population from which it is drawn. The present study consists of 200 BTC students studying in Teacher-Training colleges of Rohtak District of Haryana, India. The sample was selected by using simple random sampling technique. The sample forms a representative sample of the entire population.

## Tool Used

To measure Academic stress of BTC students the investigator selected and used the Abha Rani Bist Battery of stress Scales. This battery is published by National Psychological Corporation, Agra. This scale consists 13 subtests which measure four components of stress-frustration, conflict, pressure and anxiety of adolescent students.

## Statistical Techniques Used

For the analysis of the data, the following statistical techniques have been used.

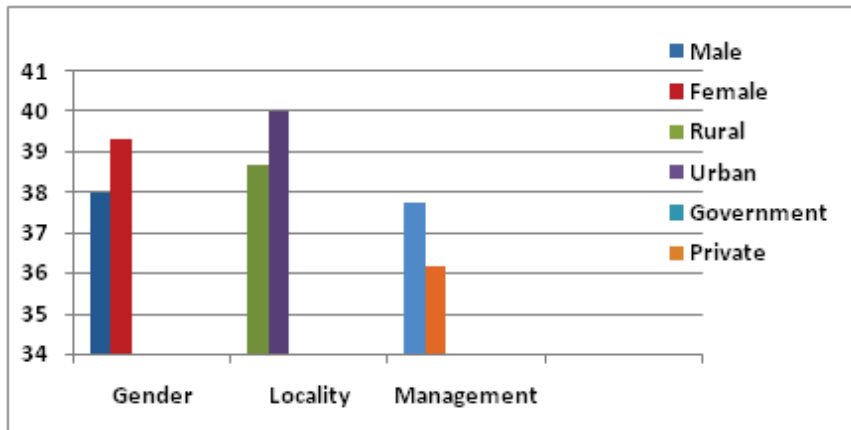
- a. Descriptive analysis (Mean & S.D) and
- b. Differential analysis ("t" test)

## Testing of Hypotheses

**Table - 1 : Showing The Mean and Standard Deviation of Academic Stress Scores of BTC Students**

Variable	Sample	N	Mean	S.D	t-value	Significant at 0.05 level
Gender	Male	100	37.98	10.33	0.10	Not Significant
	Female	100	39.31	9.71		
Locality	Rural	100	38.69	7.10	0.82	Not Significant
	Urban	100	39.97	9.20		
Management	Government	100	37.72	9.23	0.33	Not Significant
	Private	100	36.15	9.12		

**Graph-1 : Mean and Standard Deviation of Academic Stress Scores of BTC Students**



## Findings

The following are the main findings of the present investigation.

1. The BTC students are having moderate level of academic stress and irrespective of sub samples of the BTC students are having moderate level of academic stress.
2. Male and female BTC students do not differ significantly in their academic stress scores.
3. Rural and urban area BTC students do not differ significantly in their academic stress scores.
4. Government and private College BTC students do not differ significantly in their academic stress scores.

## Conclusion

The present study reveals that the BTC students are having moderate level of academic stress and irrespective of sub samples of the BTC students are having moderate level of academic stress. The male students' academic stress is higher than female student. The urban students' academic stress is higher than rural student. The Government College BTC student's academic stress is less than private College BTC student.

## EDUCATIONAL IMPLICATIONS

The result of the study shows that the level of BTC students of Teacher-Training colleges about academic stress, being in touch with daily lessons is a good idea. Try to be regular in attending and concentrating in lectures. Last minute studying should be avoided and remember that a regular seven hours of sleep is mandatory for the body to function well. One should identify the best time and place for studying and this varies with each individual. The students are aware of the exact topics that are going to come for the exams and previous year's question papers should give you an idea about the exam pattern. Taking regular short breaks while working helps one relax and concentrate for longer. One should always set 'realistic' goals in life and never let negative thoughts get into one's mind. On the day of the exams one should remain calm and stop being nervous.

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# The Evaluation System

Bhumika Tripathi\*

## Abstract

*Most of the universities have their own internal discipline-specific exams, and methods to evaluate the outcome of learning which they use these data to evaluate their programs and present it to the regional accreditation commission. It is difficult, as well as, improper to judge all different types of institutions by a common standard. The curriculum should clearly state how the learning outcomes are achieved and how it would be useful in shaping the career of a student in that particular discipline. The designing of the curriculum should be done by an external (private/government board) whose members should not be only educators but also prospective employers in the area of that discipline. It would also be useful to have a common external exam, specific to the type of institution to evaluate the learning outcomes in a specific subject taught in the university. This exam can be conducted by the external accreditation board, based on the common curriculum. The university would also have to maintain a database of students that keeps track of the career of the graduating students. This strategy cannot be employed for a common evaluation system for similar sized universities in the country/state. The objective of this paper is not to propose the evaluation system within the framework and restraints of existing institution but, first to decide the evaluation system and then to shape the institutional systems accordingly. Here, it must be borne clearly that, the term used is the Evaluation and not the Examination An Evaluation is a continuous process of reporting one's performance during the full tenure of the course in all aspects of the learning process, viz. Sincerity, learning attitude, grasping ability and presentation of the knowledge, one has acquired. It may be explained by suggesting a proposed format of attendance/detention, tests, assignments in classroom/at home, end semester examinations ,extra - curricular activities ,a jury ,admission in the next semester ,improvement and certificate. Understanding of the concepts is the important point. The examination system is meant for proper evaluation of the concept .Students are studying because of the examinations. An evaluation system should keep this aspect in mind. Before we ponder over the evaluation system, it is appropriate to take up the terms, Measurement, assessment, and evaluation. They sound similar meanings yet are different with substantial differences.*

## Introduction

Uttar Pradesh has more than 30 universities, including 4 central universities, 20 state universities, 8 deemed universities, 2 IITs, One IIM at Lucknow, 1 NIT at Allahabad and several polytechnics, engineering colleges and industrial training institutes. Prestigious

institutes like the Sanjay Gandhi Post Graduate Institute of Medical Sciences, Indian Institute of Technology Kanpur, Indian Institute of Technology (BHU) Varanasi, the Indian Institute of Management Lucknow, the Indian Institute of Information Technology, Allahabad, the Motilal Nehru National Institute of Technology, Allahabad and the Harcourt Butler Technological

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Institute are known worldwide for their quality education and research in their respective fields. The presence of such institutions provides the students of the state ample opportunities for higher education. Other universities in the state include Gautam Buddha University, Banaras Hindu University, Purvanchal University, Aligarh Muslim University, Deen Dayal Upadhyay Gorakhpur University, University of Allahabad, Indian Veterinary Research Institute Bareilly, IMT Ghaziabad, Gautam Buddha Technical University, M.J.P. Rohilkhand University, Narendra Dev University of Agriculture and Technology, Babasaheb Bhimrao Ambedkar University, and the King George's Medical University. The Integral University, a state level institution, was established by the Uttar Pradesh Government to provide education in different technical, applied science, and other disciplines. The Central Institute of Higher Tibetan Studies was founded as an autonomous institute by the national ministry of culture. Jagadguru Rambhadracharya Handicapped University, Chitrakut is the only university established exclusively for the disabled in the world. A large number of Indian scholars educated at different universities in Uttar Pradesh including Harivansh Rai Bachchan, Motilal Nehru, Harish Chandra and Indira Gandhi were born, worked or studied in the geographical area of the state.

Measurement refers to the process by which the attributes or dimensions of some physical objects are determined. When we measure, we generally use some standard instrument to determine how big, tall, heavy, voluminous, hot, cold, fast, or straight something actually is. Standard instruments refer to physical devices such as rulers, scales, thermometers, pressure gauges, etc. We measure to obtain information about it. Such information may or may not be useful, depending on the accuracy of the instruments we use, and our skill at using them.

Assessment is a process by which information is obtained relative to some known objective or

goal. Assessment is a broad term and may include testing. A test is a special form of assessment. Tests are assessments made under contrived circumstances especially so that they may be administered. In other words, all tests are assessments, but not all assessments are tests. Whether implicit or explicit, assessment is most usefully connected to some goal or objective for which it is designed.

Evaluation is, perhaps, the most complex and the least understood terms. The "value" is inherent in the idea of an evaluation. In an evaluation, we are engaged in some process designed to provide information that may help us make a judgment about a given situation. Generally speaking, an evaluation process requires information about the situation in question. A situation is an umbrella term that takes into account such ideas as objectives, goals, standards, procedures, and so on. When we evaluate, we are sure that the process will yield information regarding the worthiness, appropriateness, goodness, validity, legality, etc., of something for which a reliable measurement or assessment has been made.

### **Evaluation in the Higher Education:**

An evaluation covers "Value judgment for an object." Educational evaluation is an analysis and a judgment of the value of an educational input, process, and outcome. There is no common curriculum for a specific discipline being followed by the undergraduate and graduate institutions and there is no common national accreditation Board for academic evaluation. Most of the universities have their own internal discipline-specific exams, and methods to evaluate the outcome of learning which they use these data to evaluate their programs and present it to the regional accreditation commission. It's important to note that there are different types of academic institutions like the Universities and different colleges of Arts and Science. It is difficult, as well as, improper to judge all different types of institutions by a common standard. The curriculum should clearly state how the learning



outcomes are achieved and how it would be useful in shaping the career of a student in that particular discipline. The designing of the curriculum should be done by an external (private/government board) whose members should not be only educators but also prospective employers in the area of that discipline. It would also be useful to have a common external exam, specific to the type of institution to evaluate the learning outcomes in a specific subject taught in the university. This exam can be conducted by the external accreditation board, based on the common curriculum. The university would also have to maintain a database of students that keeps track of the career of the graduating students. The evaluation should not only take into account exam scores but also use this database to assess how the respective program has affected the career of the students. This strategy can not be employed for a common evaluation system for similar sized universities in the country/state.

In our global era, the education must aim at 'To transform a learner into a performer' Hence, a thought process must start from the point of the ultimate goal of education. Thus, the education system should be developed giving sequential considerations to:-

1. **PERFORMANCE:** What information, knowledge, sense, skills and abilities a Graduate must be equipped with, so that he is able to perform the respective task efficiently
2. **EVALUATION:** What methodology of evaluation should be adopted to evaluate whether he has acquired the expected qualities and to what extent.
3. **EDUCATION:** What (Course contents) and how (Teaching methodology) should he be taught/trained so that he is able to acquire these qualities.
4. **INSTITUTION:** What should be the framework of a system (Including Universities, colleges, infrastructure, organizational structure, ordinance, Rules, guidelines, norms

etc.) not to hamper but to fulfill the above considerations.

Out of the above considerations, expected Performance and Education are the most important aspects. But, this deliberation is limited to bring forth some suggestions on evaluation system only. Consequently, the institution and system will have to be reformed accordingly.

The objective of this paper is not to propose the evaluation system within the framework and restraints of existing institution but, first to decide the evaluation system and then to shape the institutional systems accordingly. Here, it must be borne clearly that, the term used is the Evaluation and not the Examination.

### The Examination System:-

1. Presently, the Examination system declares results, someone passed or failed.
2. Examination is a testing of one's instant memory and understanding at a given time only.

### Proposed Evaluation Process:-

1. An Evaluation has nothing to do with the terms like 'pass' or 'fail'. It is expressed in form of only a report of performance in terms of absolute marks or Grade.
2. An Evaluation is a continuous process of reporting one's performance during the full tenure of the course in all aspects of the learning process, viz. Sincerity, learning attitude, grasping ability and presentation of the knowledge, one has acquired.

It may be explained by suggesting a proposed format, stepwise, as follows:

#### 1. ATTENDANCE/DETENTION:

A student gets admission in a course and attends classes as per timetable. His attendance should be

recorded subject-wise and should be displayed monthly and mentioned in the final evaluation report. That is all. No Detention and rules for Minimum Attendance should be prescribed.

## 2. TESTS:

The students should be subjected to certain intermittent tests, as regards to how much they have grasped out of what they have been taught individually. A teacher helps them in doing so by providing an evaluation report in terms of marks and returns the test answer book, so that the students are able to understand one's own performance. This performance will become a part of the final evaluation report, at the end of each semester/year. Words like Pass or Fail should not be recorded as the result of the tests.

## 3. ASSIGNMENTS IN CLASSROOM / AT HOME:

A student should complete some assignments both in class / Laboratory/ Studio / Workshop and at home, which again will be evaluated and given to the student for self-evaluation of his performance. This evaluation, too, will become a part of his final Evaluation report. Like-wise, fail or pass words need not be used.

## 4. END-SEMESTER EXAMINATIONS:

A student should appear in the end of the semester examination in Practical, as well as, Theory papers. His performance in practical examination should be evaluated based on viva-voce examination. The answer books of theory examination should be checked and marks be allotted and thereafter the answer books should be returned to the student along with the marks to review his performance.

## 5. EXTRA-CURRICULAR ACTIVITIES:

Objective report of his extra-curricular activities should become part of his final evaluation report.

## 6. A JURY:

Evaluation of every aspect (Except of End semester Theory paper) should not be done by a single teacher but always by a jury.

## 7. ADMISSION IN THE NEXT SEMESTER:

No student should be denied admission in next semester. All the students will complete the course within the speculated duration (No need to say successfully or unsuccessfully.)

8. IMPROVEMENT: There is no need of a supplementary examination as there is nobody becoming pass or fail.

- a. However the student will be allowed to two attempts to improve his score by appearing in immediately next two End semester theory examinations, i.e. within a year, and not thereafter.
- b. If a student wishes to improve all other performances, viz. sessional assignments, practical, class tests etc, he will have to take a re-admission in the semester afresh.

## 9. CERTIFICATE:

The Following proforma of a certificate should be preferable for all-purpose:

Shri. \_\_\_\_\_ got the admission in the course \_\_\_\_\_ on \_\_\_\_\_ and has completed the course on \_\_\_\_\_ with following overall performance as shown in Evaluation Report.

### 1. DEGREE:

Except the above performance certificate, there should be no need to give away any DEGREE to a student.

### 2. REWARDS AND MERIT LIST:

However, the toppers may be rewarded and a Merit list may be declared based on the marks in evaluation report even without declaring one being passed or Failed.

### 3. ONE'S EVALUATION REPORT SPEAKS OF ALL HIS QUALITIES ALONG WITH ITS EXTENT.

## EVALUATION REPORT

S. No.	Aspect of Evaluation Out of	Semesters/ Sessions				
		I	II	III	IV	Total
01.	Attendance					
02.	Class Assignments					
03.	Home Assignments					
04.	Practical					
05.	Projects					
06.	Class Tests					
07.	End-Semester Exams.					
08.	Self Study					
09.	<b>Students' activities</b>					
10.	Academic Research					
11.	Sports					
12.	cultural					
13.	Representations					
14.	Awards					
15.	Hobbies					
16.	Qualities					
17.	Sincerity					
18.	Initiative					
19.	Creativity					
20.	Organizational Skill					
21.	Sensitivity					
	<b>TOTAL</b>					

WHAT ELSE IS NEEDED?

WHAT FOR?

WHOM FOR?

After all, every employer or institute giving admissions is free to test a candidate afresh to select him for employment and further studies etc.

### Conclusion:

Understanding of the concepts is the important point. The examination system is meant for proper evaluation of the concept. As the mentality of Eastern UttarPradesh students in acquiring knowledge/skills is linked only to the examination, and then the importance of the examination stands fore most. Students are

studying because of the examinations. An evaluation system should keep this aspect in mind.

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# Gender Inequality in India

Dr. Shri Kant Dwivedi\*

## Abstract

*We proud Indians of 21st century rejoice in celebrations when a boy is born, and if it is a girl, a muted or no celebrations is the norm. Love for a male child is so much so that from the times immemorial we are killing our daughters at birth or before birth, and if, fortunately, she is not killed we find various ways to discriminate against her throughout her life. Though our religious beliefs make women a goddess but we fail to recognize her as a human being first; we worship goddesses but we exploit girls. We are a society of people with double-standards as far as our attitude towards women is concerned; our thoughts and preaching are different than our actions. In this paper author try to understand the phenomenon of gender inequality and search for some solutions.*

**Key Words:** Gender inequality

## Concept of Gender Inequality

‘Gender’ is a socio-cultural term referring socially defined roles and behaviors assigned to ‘males’ and ‘females’ in a given society; whereas, the term ‘sex’ is a biological and physiological phenomenon which defines man and woman. In its social, historical and cultural aspects, gender is a function of power relationship between men and women where men are considered superior to women. Therefore, gender may be understood as a man-made concept, while ‘sex’ is natural or biological characteristics of human beings.

Gender Inequality, in simple words, may be defined as discrimination against women based on their sex. Women are traditionally considered by the society as weaker sex. She has been accorded a subordinate position to men. She is exploited, degraded, violated and discriminated both in our homes and in outside world. This peculiar type of discrimination against women is

prevalent everywhere in the world and more so in Indian society.

## Causes and Types of Gender Inequality in India

The root cause of gender inequality in Indian society lies in its patriarchy system. According to the famous sociologists Sylvia Walby, patriarchy is “a system of social structure and practices in which men dominate, oppress and exploit women”. Women’s exploitation is an age old cultural phenomenon of Indian society. The system of patriarchy finds its validity and sanction in our religious beliefs, whether it is Hindu, Muslim or any other religion.

For instance, as per ancient Hindu law giver Manu: “Women are supposed to be in the custody of their father when they are children, they must be under the custody of their husband when married and under the custody of her son in old

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age or as widows. In no circumstances she should be allowed to assert herself independently”.

The above described position of women as per Manu is still the case in present modern day social structure. Barring few exceptions here and there, women have no power to take independent decisions either inside their homes or in outside world. In Muslims also the situation is same and there too sanction for discrimination or subordination is provided by religious texts and Islamic traditions. Similarly in other religious beliefs also women are being discriminated against in one way or other.

The unfortunate part of gender inequality in our society is that the women too, through, continued socio-cultural conditioning, have accepted their subordinate position to men. And they are also part and parcel of same patriarchal system. Extreme poverty and lack of education are also some of the reasons for women's low status in society. Poverty and lack of education derives countless women to work in low paying domestic service, organized prostitution or as migrant laborers. Women are not only getting unequal pay for equal or more work but also they are being offered only low skill jobs for which lower wages are paid. This has become a major form of inequality on the basis of gender.

Educating girl child is still seen as a bad investment because she is bound to get married and leave her paternal home one day. Thus, without having good education women are found lacking in present day's demanding job skills; whereas, each year's High School and 10+2 standard results show that girls are always doing better than boys. This shows that parents are not spending much after 10+2 standard on girl child and that's why they lack in job market.

Not only in education, in case of family food habits, it is the male child who gets all the nutritious and choicest foods while the girl child gets whatever is left behind after the male members have taken their meals or the food which is low in both quality and nutrition. And

this becomes a major health issue in her later years. One of the main reasons for the high incidences of difficult births and anemia in women is the poor quality of food which a girl always gets either in her paternal home or in her in-laws as also is the excessive workload that they are made to bear from their early childhood. So the inequality or discrimination against women is at various levels in the society, either in home or outside home.

## Gender Inequality in India: Important Data

### Global Indices:

Gender Inequality is also reflected in India's poor ranking in various global gender indices.

- **UNDP's Gender Inequality Index- 2014:** India's ranking is 127 out of 152 countries in the List. This ranking is only above Afghanistan as far as SAARC countries are concerned.
  - **World Economic Forum's Global Gender Gap Index- 2014:** India's ranks at 114 in the list of 142 countries of the world. This Index examines gender gap in four major areas:
    - Economic participation and opportunity.
    - Educational achievements.
    - Health and life expectancy.
    - Political empowerment.
- India's position** on these indicators was as follows:
- Economic participation and opportunity: **134th**
  - Educational achievements: **126th**
  - Health and Life expectancy: **141st**
  - Political empowerment: **15th**

These two important Global Indices show the sorry state of affairs in India as far as gender equality is concerned. Only in case of 'Political Empowerment' India is doing fine which is a welcome sign. But other indices are very poor and a lot need to be done to improve the same.

## Gender Inequality Statistics

Gender inequality manifests in varied ways. And as far as India is concerned the major indicators are as follows:

- **Female Foeticide**
- **Female Infanticide**
- **Child (0 to 6 age group) Sex Ratio: 919**
- **Sex Ratio: 943**
- **Female literacy: 46%**
- **Maternal Mortality Rate: 178 deaths per 100000 live births.**

These above mentioned indicators are some of the important indices which show the status of women in our country.

Female foeticide and female infanticide are most inhuman of acts. And it is a shame that in India these practices are prevailing at large scale. The data shows that despite the law in place viz Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 sex selective abortion is still on the rise. One estimate done by MacPherson shows that more than 100000 illegal abortions are being performed every year in India mainly for the reason that the fetus is of girl child. Due to this, there is an alarming trend which has come to the notice in 2011 census report; the report shows Child Sex-Ratio (i.e sex-ratio of children between the age group 0 to 6) at 919 which is 8 points lesser than the 2001 data of 927. The data indicates that sex-selective abortion is increasing in our country.

As far as overall sex-ratio is concerned, it's 943 in 2011 report as compared to 933 of 2001 which is 10 points increase. Though it is a good sign that overall sex ratio is increasing but it's still tilted against females. Female literacy is at 65.46% in 2011 as against 82.14% of male literacy. This gap indicates a wide gender disparity in India that Indians do not give enough importance to the education of girls.

All these indicators points towards the sorry state of affairs in India regarding gender justice and women's human right. Though every year

government starts various schemes and programs apart from existing ones for the benefit and empowerment of women but on the ground there are not enough visible changes. The change will appear only when the mind set of Indian society would change; when the society would start treating male and female on equal footing and when a girl would not be considered as a burden.

## Legal and Constitutional Safeguards against Gender Inequality

Indian Constitution provides for positive efforts to eliminate gender inequality; the Preamble to the Constitution talks about goals of achieving social, economic and political justice to everyone and to provide equality of status and of opportunity to all its citizens. Further, women have equal right to vote in our political system. Article 15 of the Constitution provides for prohibition of discrimination on grounds of sex also apart from other grounds such as religion, race, caste or place of birth. Article 15(3) authorizes the State to make any special provision for women and children. Moreover, the Directive Principles of State Policy also provides various provisions which are for the benefit of women and provides safeguards against discrimination. Other than these Constitutional safeguards, various protective Legislations have also been passed by the Parliament to eliminate exploitation of women and to give them equal status in society. For instance, the Sati (Prevention) Act, 1987 was enacted to abolish and make punishable the inhuman custom of Sati; the Dowry Prohibition Act, 1961 to eliminate the practice of dowry; the Special Marriage Act, 1954 to give rightful status to married couples who marry inter-caste or inter-religion; Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Bill (introduced in Parliament in 1991, passed in 1994 to stop female infanticide and many more such Acts. Furthermore, the Parliament time to time brings out amendments to existing laws in order to give protection to women according to the changing needs of the society, for instance, Section 304-B

was added to the Indian Penal Code, 1860 to make dowry-death or bride-burning a specific offence punishable with maximum punishment of life imprisonment. So there are varied legislative safeguards and protection mechanisms for women but the ground reality is very different. Despite all these provisions women are still being treated as second rate citizens in our country; men are treating them as an object to fulfill their carnal desires; crimes against women are at alarming stage; the practice of dowry is still widely prevalent; female infanticide is a norm in our homes.

### How we can Eliminate Gender Inequality

The list of legislations as well as types of discriminations or inequalities may go on but the real change will only come when the mentality of men will change; when the male species of human beings would start treating women as equal and not subordinate or weaker to them. In fact not only men but women also need to change their mindset as through cultural conditioning they have also become part of the same exploitative system of patriarchy and are playing a supportive role in furthering men's agenda of dominating women.

Therefore, what is needed is the movement for Women's empowerment where women can become economically independent and self-reliant; where they can fight their own fears and go out in the world fearless; where they can snatch their rights from the clutches of men and they don't have to ask for them; where women have good education, good career, ownership of property and above all where they have freedom of choice and also the freedom to make their own decisions without the bondages of age old saying of Manu.

Let's hope and wish that our participative democracy, in times to come, and with the efforts

of both women and men, would be able to found solutions to the problem of gender inequality and would take us all towards our cherished dream of a truly modern society in both thought and action.

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# Constructivism in Education and Learning : A Critical Review

Mr.Anurag Sharma\*

## Abstract

*This paper critical examines the concepts of constructivism and it's application in contemporary education and learning. I discuss the definition and scope of constructivism in contrast with Behaviourism approach. The behaviorism is the older approach for teaching and learning, while the constructivism is more contemporary in nature and has found its application in modern day teaching and learning. The emergence and need of technical education put the constructivism in the mainstream approach.*

**Keywords :** *Constructivism, Scope of Constructivism, Contemporary Education, Behaviorism, Critical Analysis of Behaviourism.*

## Introduction

In the contemporary world, education and teaching have taken the centre-stage. There are different approaches for the education and learning, however constructivism and behaviorism are the two main approaches, which are prevalent in education and learning. These approaches have their own application depending upon the nature and type of education and learning. The idea of this paper is to discuss these main concepts and understand in context with contemporary scenario. In the first part, I discuss the definitions and scope of constructivism and later part include analysis in context with behaviorism approach. This paper could be a building block for academic researcher and practitioners. The Nature of Constructivism Constructivism is a paradigm that can influences the present-day education and learning. Constructivism is basically a theory -based on observation and scientific study. Defining the scope of constructivism is still a challenge, however different authors have different views

on the definition and scope of constructivism. Naylor and Keogh (1999) described, "The central principles of this approach are that learners can only make sense of new situations in terms of their existing understanding. Learning involves an active process in which learners construct meaning by linking new ideas with their existing knowledge." It means that a learner needs to have an existing knowledge to make the meaning by linking new idea.

Moore (2007) differentiates constructivism from positivism on the basis of their meaning. Moore says that positivism "things" give order to words whereas for constructivism "words give order to "things". The essential core of constructivism is that learners actively construct their own knowledge and meaning from their experiences (Fosnot, 1996; Steffe & Gale, 1995). The construction of their own knowledge is a combination of Psychology and Philosophy. Hence the learners unknowingly use the concepts of philosophy and psychology in their learning process and benefit themselves by enhancing

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their learning experience. Bernstein (2000) argued that theoretical knowledge differs from everyday knowledge because each is embedded in a different system of meaning and each has a different structure. The theoretical knowledge is based upon the text books that were written many years ago, textbooks have the updated editions also but they can hardly cope with the changes in the practical issues linked with the textbook knowledge. This issue has higher concern in technical institutions and courses, where the technology is upgrading very quickly. It is major challenge for the academicians to fill the gap between the textbook knowledge and practical knowledge.

**Structure of Knowledge and Constructivism**  
Young (2008) argues that while all jobs require context-specific knowledge, 'many jobs also require knowledge involving theoretical ideas shared by a "community of specialists"'. It is some extent true in the case of specific discipline where a professionals needs to know the different theoretical ways to solve a problem. In the academic research, it plays a vital role because new researcher takes the earlier textbook knowledge as a platform to build their research framework. It helps them in restricting their boundary limits. Hence it's specific to the profession and cannot be generalised to the all professions. According to Gamble (2006) Everyday knowledge is organised as horizontal discourse and it is very particular in terms of the context it is used. Most of the everyday knowledge is tacit and can't be easily coded or transformed from one source to another. This everyday knowledge is acquired and accumulated over a period of time.

However, Nola (1998) said, "Constructivists allege that it is we who constitute or construct, on the basis of our theorizing or experience, the allegedly unobservable items postulated in our theories." So according to Nola, it's our existing knowledge and experience, which helps in our learning and knowledge. Jenkins (2000)

"Constructivists of different persuasion (hold a) commitment to the idea that the development of understanding requires active engagement on the part of the learner." So the learner's involvement is necessary in the development and understanding of new knowledge. The learner's involvement differs from the types of learning; e.g. in some high-tech environment, learner's can be simulating the practical conditions in the laboratories. Due to the emergence of simulating tools and audio-video technology, it's quite possible to simulate the same practical environment in the research laboratories. In all the above definitions, it's necessary for the learner to get actively involved. Move from Behaviorism to Constructivism In contrast to behaviorism, constructivists argue, "Knowledge is not passively received but built up by the cognizing subject" (Von Glasersfeld, 1995). Behaviorism approach was prevalent in the early part of nineteenth century and was the major influence factor in the learning and education. However, later the constructivism took over the centre stage for vocation and technical education learning. The main reason for the emergence of constructivism in technical education is due to the nature of education and learning involved in technical institution. Technical education is not only about classroom learning; it's more about learning by experience and for that technical institutions have workshops and on-hand practical training.

Researchers argue that in constructivism approach, the learners learn new skills and also keep the old skills. The new learning and skills don't overwrite the old skills and knowledge. For learning, the most important factor is surrounding and the teacher. Some student don't learn from the people they don't like (Cornelius-White, 2007), hence it becomes important for the teacher to build a relationship with the students and make sure that the students feel safe and comfortable in their company. The learning is always good and effective when the students feel safe and secure and they can focus properly.



A research finding in USA and UK in person centred class-room management model (Consistency Management & Cooperative Discipline (CMCD)) schools shows the increases in teacher and student attendance, reduced office discipline referrals, and improved classroom and school learning environments (Eiseman, 2005; Freiberg, Connell, & Lorentz, 2001; Freiberg & Lapointe, 2006). Hence the schools, which were personally maintained and supervised by a cooperative group or society, do well comparative to the other schools.

The reason can be that the students feel more safe and secure in such a warm and cordial environment and eager to learn more. In such situation it becomes necessary for the school management to decentralise the control.

## Conclusion

This paper is a concise overview of the existing literature of constructivism and its application in contemporary education and learning. It is a very good platform for the researcher who is planning to explore this area in more detail. In the last part, As I touched some issues in the school education also hence it also opens a path for some forward thinking and take the challenge to more about school education pedagogy methods. Under school education system, the kindergarten, middle school or senior school can provide the excellent platform for conducting a survey or focus group research.

Another future area of research could be the pedagogical methods for adult education and for special education (schools for students with various types of disabilities). This is an emerging and various state and centre government is also committed to work in these areas of specializations.

However, the concise analysis is based on the past literature hence it doesn't project the exact current situation of this area. Quantitative and qualitative analysis can be done on the existing data to make better future projections. Another

important research area could be the comparative analysis of application of constructivism and behaviorism in technical education and adult literacy program. It would be also interesting to analysis the trends in geographical regions.

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# Adjustment in Relation to Spiritual Intelligence and Life Satisfaction among Female Senior Secondary School Teachers

Ms. Sonia Sharma\*

## Abstract

*The present research was performed to survey a relationship adjustment of spiritual intelligence and Life satisfaction among female senior secondary school teachers of district Ludhiana, Punjab. A total of 530 females senior secondary school teachers were selected by the simple random sampling method to participate in this study. The scales of Bell Adjustment Inventory by H. M. Bell (1971), Spiritual Intelligence Scale (SIS) by Dhar and Dhar (2005) and Life Satisfaction Scale by Singh and Joseph (2007) were used to collect the data. For statistical analysis of data, it used the Pearson's correlation method, and t-test. The results of this study showed there was negative and significant relationship of adjustment with life satisfaction and spiritual intelligence.*

**Keywords:** Adjustment, Life Satisfaction, Spiritual Intelligence Married and Unmarried Females Senior Secondary School Teachers.

## Introduction

During the past fifty years, the situation of working women has changed dramatically. Women as teachers have expanded their career aspirations. They are no longer confined to traditional female fields such as education or nursing and teaching. We have seen the integration of women into previously male dominated fields such as teaching, accounting, medicine, law, etc. Integration; however, does not necessarily mean acceptance and equality nor does it mean that the stress created by work family conflict has been resolved. Women today spend less time maintaining the household than they did 30 years ago (Jacobs, 2012).

## Adjustment

Adjustment is a process which reflects total personality of a person by balancing and equilibrating his behavior according to the present condition or we can also say that

adjustment is a process maintaining, adjusting and behaving according to physical and social environment. Adjustment includes important variables which brings satisfaction in an individual's behavior. It is well known to us that all the human beings try to bring all the necessary coordination and balance with surroundings to live a happy and satisfied life. Adjustment is a process which is influenced by surroundings and biological factors. A well-adjusted person is one whose behavior is appropriately engaged with society norms, culture and a given interpersonal situation. Adjustment is state or equilibrium between an organism and its physical and social atmosphere in which there is no stimulus alters evoking a response. An adjusted person lives a healthy, contented and cheerful life. Adjustment refers to inner degree of capacities, potentialities and caliber of a person which enables to coordinate with surroundings. When we behave cordially with our surroundings it shows that we are adopting, adjusting and modifying ourselves

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with surroundings. Adjustment is that ladder which takes a person from the bottom of dissatisfaction to the high level of satisfaction. According to biologists the term adapts deals with physical demands of the surrounding. According to psychologists the term adjustment deals with varying condition of society or interpersonal relation of individual in the society. Adjustment infers the response of an individual according to the needs, demand as well as pressure of social surroundings forced on the person.

### **Spiritual intelligence**

The twentieth century showed a third intelligence called spiritual intelligence based on the evidence of psychology, neurology, and anthropology sciences. Spiritual intelligence is the ability to ask question related to the existence of one's on the world. A person high in spiritual intelligence shows faith in all the religions but without any kind of default feelings, constriction, feeling of superiority, intolerance or injustice. Spirituality is above all the man made narrow religions bounds which act as hindrance in path for the attainment of spirituality. A spiritual person has very spiritual qualities without being religious at all. Spiritual intelligence is spiritual consciousness of a person. Spirituality is like an umbrella which covers all the intelligences namely intellectual, ethical, emotional, conative, psychomotor and interpersonal. Spirituality is an approach to accept everyone with opened hands and heart. Spirituality involves peak experiences not stages. A fundamental viewpoint would most probably comprise all these different views and others as well (Wilber, 1998). Howell (2004) and Hussain (2005), researchers like Royes (2005) and King (2008) have also contributed to the theory of spiritual intelligence. Zohar and Marshall (2000) stated that when spiritual intelligence is high, we appear to be intellectual and have proper behavior. However when spiritual intelligence is low, people will appear to have problematic behavior. They stated, individuals with high spiritual intelligence demonstrated higher measures of satisfaction

and performance. To achieve this, we should search for those capabilities of an individual's being and behaviour which signify the presence of spiritual intelligence at work.

White (2006) spiritual intelligence is based on extensive literature review process, which Spiritual Quotient designated as a set of seven cognitive characteristics:

- Spiritual Quotient is a rational higher level of consciousness;
- Spiritual Quotient is the capacity for affective intellectual development;
- Spiritual Quotient implies that an individual has the unique ability to construct a vision that is infused with a notion of ultimate purpose;
- Spiritual Quotient is the ability of seeing connections between existential ideas and varied life-world experiences;
- Spiritual Quotient provides a grounding for authentic self-efficacy coupled with an empathetic understanding of others;
- Spiritual Quotient is a predisposition to see inherent connections that may not be tangible and to seek existential answers that support a rational theoretical orientation;
- Scientific research suggests that the brain's actual "physiological organization" is designed to produce spiritual thoughts

The new paradigm of spiritual leadership focuses on vision, empowerment, risk, creativity, harmony, trust, honesty, and compassion. The terms that accompany this new paradigm are spiritual leadership (Wolf, 2004), moral conduct (Thompson, 2004), authentic leadership (Beagrie, 2005), and ethical conduct (Marques, 2006).

Spiritually intelligent employees are not the only ones who are important at workplaces but always at home to handle the different situations more wisely. Spiritual intelligence and profitability are not mutually exclusive; in fact, integrating ethics and spiritual values into the workplace can lead to higher productivity and

profitability, happier employees, and more honest relationships with customers and can help build the organization's reputation (Marques, 2006). Spiritually intelligent employees are more consistent with themselves, happier, and more deeply integrated and harmonious (George, 2006).

### **Life satisfaction**

Satisfaction with life is a consistent, comprehensive concept which reflects the emotion and general viewpoint of a society towards the world in which they live. Seligman (2005) regards life satisfaction to be a reflection of balance between an individual's requirements and his/her present situation. For some, satisfaction with life is defined as prospect hope, whereas future hope is one of the consequences of satisfaction or dissatisfaction with life, such that when a person is wholly satisfied with their life, they become more confident about the future. As a whole, satisfaction with life is the feeling of prosperity because the individual finds meaning and satisfaction in life, from the past to the present with hope of a desirable life in the future. Yang (2002) has reported a meaningful relation between the rate of an individual's combativeness and decreased satisfaction with life. The findings of Losoncz(2009) have shown that students who enjoy a higher level of satisfaction in life have greater feelings of welfare and happiness. Satisfaction with life is one of the efficient factors of human promotion and evolution. This issue is particularly important amongst women. The results have shown a meaningful relation between spiritual intelligence and life satisfaction, as well as between emotional intelligence and life satisfaction. Spiritual and emotional intelligence variables are predictors of life satisfaction Nadeu (2011), have found that spirituality influences general satisfaction with life. Personal spirituality is a reliable predictor of increased satisfaction with life. Starks and Hughey (2003) in a survey of the relation between spirituality and life satisfaction in African American women have shown that women who had higher religious

towards spirituality enjoyed meaningful correlations with satisfaction in life. Spirituality was a variable that played a role in life satisfaction in middle aged African women despite their age, income and education levels. The results of a study by Okulicz-Kozaryn (2010) have also shown that being religious was connected to higher satisfaction with life. With due attention to the aforementioned studies and the importance of satisfaction with life and recognition of factors related to this satisfaction, this research sought to determine if a connection between spiritual intelligence and life satisfaction existed in two groups, unmarried and married females. Spiritual intelligence was defined based on individuals' adjustment abilities that consequently influenced satisfaction with life. We have additionally sought to determine if there was a significant difference in two groups, university and theological students concerning spiritual intelligence and satisfaction with life.

### **Objectives of the study**

1. To study the relationship of spiritual intelligence and adjustment of senior secondary school teachers.
2. To study the relationship of life satisfaction and adjustment of senior secondary school teachers

### **Hypotheses of the study**

1. There will be no significant relationship of adjustment with life satisfaction and spiritual intelligence of senior secondary school teachers.
2. There will be no significant relationship of adjustment with spiritual intelligence of senior secondary school teachers.

### **Design**

Descriptive survey method was employed in the present investigation. The present survey was conducted on a sample of 530 senior secondary school teachers. By using the quartile method (Q 1 and Q 3 ) teachers with high and low levels of

life satisfaction and spiritual intelligence were identified.

**Sample**

Stratified randomization technique was used for the selection of sample. The sample was consisted of 530 senior secondary school teachers. The sample of working women were collected from district Ludhiana which further consist tehsils and tehsils are split into blocks. The information regarding all these was collected from census 2011.

**Tools Used**

- I. Bell Adjustment Inventory by H. M. Bell (1971)
- II. Life Satisfaction Scale by Singh and Joseph, (2007).
- III. Spiritual Intelligence Scale (SIS) by Dhar and Dhar (2005).

correlation by Pearson’s product moment method was found between spiritual intelligence and adjustment.

Hence, first hypotheses that There will be no significant relationship of adjustment with spiritual intelligence of senior secondary school teachers is rejected. This shows that as the scores of spiritual intelligence increases the adjustment scores decreases and less scores of adjustment show better adjustment. It means that the working women who have high levels of spiritual intelligence have high degree of adjustment. It shows that there is relationship of adjustment with spiritual intelligence. This shows that spiritual intelligence directly influenced the adjustment of working women.

Hypothesis-2. There will be no significant relationship of adjustment with life satisfaction of senior secondary school teachers.

**Table 1 : Co efficient Of Correlation between  
Spiritual Intelligence and Adjustment.**

Sr. No.	Variables	N	R	Level of significance
1.	Spiritual Intelligence	530	-.129**	0.01
2.	Adjustment	530		

\*\*p<0.01 level

**Statistical Techniques Used**

Following techniques were used for testing the hypotheses.

- I. t-test
- II. Mean
- III. Standard deviation
- IV. Pearson’s product moment correlation

**Interpretation and Discussion of Results**

1. Hypothesis-1. There will be no significant relationship of adjustment with spiritual intelligence of senior secondary school teachers. To verify the above hypotheses, co-efficient of

To verify the above hypotheses, co-efficient of correlation by Pearson’s product moment method was found between spiritual intelligence and adjustment.

Hence, second hypotheses that There will be no significant relationship of adjustment with life satisfaction and spiritual intelligence of senior secondary school teachers is rejected. This shows that as the scores of life satisfaction increases the adjustment scores decreases and less scores of adjustment show better adjustment. It means that the teachers who have high levels of life



**Table 2 : Co efficient Of Correlation between Life Satisfaction and Adjustment.**

Sr. No.	Variables	N	R	Level of significance
1.	Life Satisfaction	530	-.251**	0.01
2.	Adjustment	530		

\*\*p<0.01 level

satisfaction have high degree of adjustment. It shows that there is a significant relationship of adjustment with life satisfaction. This shows that life satisfaction directly influenced the adjustment of working women.

### Conclusions

In the present study, researcher found following conclusions:-

There is a significant relationship (.-129, significant at 0.01 level) between spiritual intelligence and adjustment.

There is significant relationship (.-251, significant at 0.01 level) between life satisfaction and adjustment.

### Discussion

The present findings revealed that adjustment is significantly correlated with life satisfaction and spiritual intelligence. The studies which go in tune with present study as by done by Yang (2006) found that age and spirituality played most significant variables affecting on the adjustment of nurses. Shaikhmahmoodi (2013) found that there was significant difference seen among religious orientation, marital adjustment and psychological well-being. Devi et.al (2016) found spiritual intelligence and adjustment was positively and significantly related with each other among arts and science college students. (in these case more adjustment scores show better adjustment). Parmar (2016) found negative and

significant relationship between life satisfaction and adjustment.

### Educational Implications

1. The present study findings show adjustment is significantly correlated with spiritual intelligence of senior secondary school teachers. The reason behind this may be that they spirituality brings feeling of compassion, ability of facing and conquering pain, high awareness and adaptability. So schools should organize such type of programme or workshops which help the teachers to enhance their spiritual intelligence and may guide them how to use this intelligence for the development of students career.

2. The present study findings showed that adjustment is significantly correlated with life satisfaction of senior secondary school teachers. The reason behind this may be that it is an overall assessment of one’s feelings, attitudes and behavior of own’s ranging from positive to negative, and teachers who are satisfied with their life see positivity in happening of everything. Life skills based programmes should be the part of daily routine.

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# ICT in Teacher Training Programme

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## Abstract

*A profound integration of new technologies into education as a central means to teaching and learning processes will inevitably require from teachers, changes in attitude and teaching paradigms, such changes will oblige them to adapt to new methodological approaches, educational concepts and management aspects all of which will have to be set in technology-rich environments. Thus, open and flexible teaching and learning processes, emergence of alternative spaces aimed at promoting communication generate new needs and expectative to be achieved by educators. This paper explores need and importance of ICT in Teachers training programme and giving few suggestions for Teacher educators and Teacher training institutes to train future teachers for successfully using ICT in their own classroom:*

“The illiterate of the 21st century,” according to futurist Alvin Toffler,” will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”

Information and communication technologies (ICT) which include radio and television, as well as newer digital technologies such as computers and the Internet have been termed textually powerful enabling tools for educational change and reform. When used appropriately, different ICT are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life.

ICTs stand for information and communication technologies and are defined, for the purposes of this discussion as a “diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information.”(Blurton 2002) These technologies include computers, the Internet, broadcasting

technologies (radio and television), and telephony. For developing countries ICT have the potential for increasing access to and improving the relevance and quality of education. It thus represents a potentially equalizing strategy for developing countries. ICT greatly facilitate the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formulation and execution, and widen the range of opportunities for business and the po

## ICT and Education

Traditional teaching and learning paradigms have been shaken by the impact of the integration of Information and Communication Technologies into educational practices at the time that teachers and trainers are confronted by challenges which range from the acquisition of skill and literacy in the usage of IT to the delivery of the necessary tools which will lead students to become knowledge creators and users. Thus,

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deeply immersed in the Society of Knowledge, a society based upon a critical, rational and reflexive use of global and distributed information (Gisbert, 2003) in which the most outstanding communication means are telematic networks. One of the greatest challenges to be overcome on our way to the 21st century is to enable teachers and students to achieve competency and mastery in, the use of technology instead of letting them be enslaved by it.

The widespread use of ICT in all areas has a direct effect upon the way in which the world is perceived. The permeating presence of telematic networks in all scopes of life allows unlimited access to information and a flexibility of time and space barriers. ICT has shaken the traditional teaching and learning approaches and poses new challenges to the educational community, challenges which emerge together with new teaching and learning environments and instructional modalities which are mainly set in virtuality. A profound integration of new technologies into education as a central means to teaching and learning processes will inevitably require from teachers, changes in attitude and teaching paradigms, such changes will oblige them to adapt to new methodological approaches, educational concepts and management aspects all of which will have to be set in technology-rich environments. Thus, open and flexible teaching and learning processes, emergence of alternative spaces aimed at promoting communication generate new needs and expectative to be achieved by educators. Using ICT in education favors interaction and collaboration among participants and the World Wide Web fosters new means of communicating and interacting both in real and a synchronous time and provides authentic material and resources that can be easily exploited. Kozma and Anderson (2002) claim that ICTs are transforming schools and classrooms by bringing in new curricula based on real world problems, providing scaffolds and tools to enhance learning, giving students and teachers more opportunities for feedback and reflection, and

building local and global communities that include students, teachers, parents, practicing scientists, and other interested parties.

### **Need of ICT in Training Programs**

The use of technology in everyday teaching and learning activities appears to be more important than specific instruction in "computer classes". While the development of technology skills is seen to have a role in the teaching and learning process, it is more important as an enabler of other teaching and learning practices, and not too important in and of itself. Schools that report the highest levels of student ICT-related skills and experience are often not those with heavy computer course requirements, but rather ones that made use of ICTs on a routine basis throughout the teacher professional development and the teaching and learning process. Some important points given below to showing the need of ICT in Training programs.

### **Training is key**

Teacher training and continued, on-going relevant professional development are essential if benefits from investments in ICTs are to be maximized

### **Teachers remain central to the learning process**

A shift in the role of a teacher utilizing ICTs to that of a facilitator does not obviate the need for teachers to serve as leaders in the classroom; traditional teacher leadership skills and practices are still important (especially those related to lesson planning, preparation and follow-up).

### **Lesson planning is crucial when using ICT**

Teacher lesson planning is vital when using ICTs; where little planning has occurred, research shows that student work is often unfocused and can result in lower attainment.



## **Introducing technology alone will not change the teaching and learning process**

The existence of ICTs does not transform teacher practices in and of itself. However, ICTs can enable teachers to transform their teacher practices, given a set of enabling conditions. Teachers' pedagogical practices and reasoning influence their uses of ICT, and the nature of teacher ICT use impacts student achievement.

## **ICTs seen as tools to help teachers create more 'learner-centric' learning environments**

In OECD countries, research consensus holds that the most effective uses of ICT are those in which the teacher, aided by ICTs, can challenge pupils' understanding and thinking, either through whole-class discussions and individual/small group work using ICTs. ICTs are seen as important tools to enable and support the move from traditional 'teacher-centric' teaching styles to more 'learner-centric' methods. ICTs can be used to support change and to support/extend existing teaching practices

Pedagogical practices of teachers using ICT can range from only small enhancements of teaching practices using what are essentially traditional methods, to more fundamental changes in their approach to teaching. ICTs can be used to reinforce existing pedagogical practices as well as to change the way teachers and students interact.

## **Using ICTs as tools for information presentation is of mixed effectiveness**

The use of ICTs as presentation tools (through overhead and LCD projectors, television, electronic whiteboards, guided "web-tours", where students simultaneously view the same resources on computer screens) is seen to be of mixed effectiveness. While it may promote class understanding of and discussion about difficult concepts (especially through the display of simulations), such uses of ICTs can re-enforce

traditional pedagogical practices and divert focus from the content of what is being discussed or displayed to the tool being utilized.

## **Teacher technical abilities and knowledge of ICTs**

Preparing teachers to benefit from ICT use is about more than just technical skills. Teacher technical mastery of ICT skills is not a sufficient precondition for successful integration of ICTs in teaching.

## **'One-off training not sufficient**

Teachers require extensive, on-going exposure to ICTs to be able to evaluate and select the most appropriate resources. However, the development of appropriate pedagogical practices is seen as more important than technical mastery of ICTs

## **Uses of ICT in Training Programs**

Teachers most commonly use ICTs for administrative tasks. Teachers most often use ICTs for 'routine tasks' (record keeping, lesson plan development, information presentation, basic information searches on the Internet). More knowledgeable teachers rely less on "computer assisted instruction"

Teachers more knowledgeable in ICTs use computer assisted instruction less than other teachers who use ICTs, but utilize ICTs more overall.

## **How teachers use ICTs is dependent on their general teaching styles**

Types of usage of ICTs correlate with teacher pedagogical philosophies. Teachers who use ICTs the most -- and the most effectively -- are less likely to use traditional 'transmission-method' pedagogies. Teachers who use more types of software tend to practice more "constructivist" pedagogies.

## Teaching with ICTs takes more time

Introducing and using ICTs to support teaching and learning is time consuming for teachers, both as they attempt to shift pedagogical practices and strategies and when such strategies are used regularly. Simply put: Teaching with ICTs takes more time (estimates vary on how much extra time is required to cover the same material; 10% is a common estimate).

## Teacher confidence and motivation Few teachers are confident users of ICTs

Few teachers are confident in using a wide range of ICT resources, and limited confidence affects the way the lesson is conducted.

Fear prevents many teachers from using ICTs  
In OECD countries, many teachers still fear using ICTs, and thus are reluctant to use them in their teaching.

ICTs motivate (some) teachers, at least at the start  
At least initially, exposure to ICTs can be an important motivation tool to promote and enable teacher professional development.

Incentives must be developed to promote effective teacher participation in continuing professional development  
Teachers require additional motivation and incentives to participate actively in professional development activities. A variety of incentives can be used, including certification, professional advancement, pay increases, paid time off to participate in professional development, formal and informal recognition at the school and community levels and among peers, reduced isolation, and enhanced productivity.

Access to ICTs is the most significant factor in whether teachers use them  
The most significant factor for continuing the development of teachers' ICT-related skills is for them to have regular access to functioning and relevant ICT equipment.

## Subject knowledge

Teachers' subject knowledge influences how ICTs are used  
The way ICT is used in lessons is influenced by teacher knowledge about their subjects, and how ICT resources can be utilized and related to it.

Teacher content mastery and understanding of student comprehension make ICT use more effective  
The evidence shows that when teachers use their knowledge of both the subject and the way pupils understood the subject, their use of ICT has a more direct effect on student achievement.

Exposure to new/additional information via ICTs is not enough  
The effect on attainment is greatest when pupils are challenged to think and to question their own understanding, rather than on exposure to new and additional information.  
ICTs can aid teacher self-learning in subject matter

By providing access to updated and additional learning resources, ICTs can enable teacher self-learning in his/her subject area.

## Teacher professional development

On-going teacher training and support is critical to the successful utilization of ICTs in education  
Teacher training and professional development is seen as the key driver for the successful usage of ICTs in education.

Teacher professional development is a process, not an event  
Traditional one-time teacher training workshops have not been seen as effective in helping teachers to feel comfortable using ICTs, let alone in integrating it successfully into their teaching. Discrete, 'one-off' training events are seen as less effective than on-going professional development activities.

Introducing ICTs expands the needs for on-going professional development of teachers  
Effective ICT use in education increases teachers' training

and professional development needs. However, ICTs can be important tools to help meet such increased needs, by helping to provide access to more and better educational content, aid in routine administrative tasks, provide models and simulations of effective teaching practices, and enable learner support networks, both in face to face and distance learning environments, and in real time or asynchronously.

Successful teacher professional development models can be divided into three phases Successful on-going professional development models can be divided into three phases: pre-service, focusing on initial preparation on pedagogy, subject mastery, management skills and use of various teaching tools (including ICTs); in-service, including structured face-to-face and distance learning opportunities building upon pre-service training and directly relevant to teacher needs; and on-going formal and informal pedagogical and technical support, enabled by ICTs, for teachers, targeting daily needs and challenges.

Effective teacher professional development should model effective teaching practices Effective teacher professional development should approximate the classroom environment as much as possible. "Hands-on" instruction on ICT use is necessary where ICT is deemed to be a vital component of the teaching and learning process. In addition, professional development activities should model effective practices and behaviors and encourage and support collaboration between teachers. On-going professional development at the school level, using available ICT facilities, is seen as a key driver for success, especially when focused on the resources and skills directly relevant to teachers' everyday needs and practices.

Training in assessment methods is important Professional development should include methods for evaluating and modifying pedagogical practices and expose teachers to a variety of assessment methods.

## **Effective professional development requires substantial planning**

A needs assessment should precede the creation of and participation in teacher professional development activities, regular monitoring and evaluation should occur of these activities, and feedback loops should be established, if professional development is to be effective and targeted to the needs of teachers.

On-going, regular support for teachers is crucial On-going and regular support is essential to support teacher professional development and can be facilitated through the use of ICTs (in the form of web sites, discussion groups, e-mail communities, radio or television broadcasts).

## **Enabling factors**

A variety of changes must be implemented to optimize teacher use of ICTs Shifting pedagogies, redesigning the curriculum and assessment, and providing more autonomy to the schools help to optimize the use of ICT. With sufficient enabling factors in place, teachers can utilize ICTs in as 'constructivist' a manner as their pedagogical philosophies would permit.

## **Role of Teacher Training Institutes**

Teachers being the key to effective use of web based tools and opportunities in schooling, they must become skilled at using them .It is the teacher after all who guide instructions and shape the instructional context in which internet and other techniques are used .It is their skill at this stage more than any other factor that determines the degree to which students learn from their internet experiences. Therefore teachers must be comfortable with ICT, able to apply it appropriately and converse easily with the help of new technological tools, researches and approaches. It is however a ground reality that most of the teachers in India are not at all prepared to use technology in classrooms. Mostly those who have basic knowledge of IT do not know how to apply these skills in classroom

instruction. Therefore professional development of university and college educators in respect to use of ICT is essential. Unless teacher educators make effective use of ICT in their own classes it will not be possible to prepare a new generation of teachers who would effectively use the new tools of learning. (Tahira Khatoon, 2006).

### Suggestions for using ICT

Following are few suggestions for Teacher educators and Teacher training institutes to train future teachers for successfully using ICT in their own classroom:

1. Teacher educators themselves must be send on training programmes time to time to learn about use of modern technologies
2. Teacher educators should use ICT in their classes time to time.
3. ICT should be included as a comprehensive part of teacher training programme focusing mostly on its practical aspects.
4. Pupil teachers should be asked to submit computerized assignments via e-mail.
5. Pupil teachers should prepare minimum five lesson plans using power-point presentation.

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# साइबर काइम की २१ वीं शताब्दी में एक नई चुनौती

डॉ० श्वेता त्यागी  
असिस्टेंट प्रोफेसर

## सार

सूचना प्रौद्योगिकी संचार का जादुई माध्यम है। इसकी पहुँच जगत नियंता के समान सभी जगह और जीवन के सभी क्षेत्रों में और सभी के लिए है, अर्थात् इंटरनेट का माध्यम व्यक्ति के जीवन के सभी क्षेत्रों को प्रभावित कर रहा, चाहे वह क्षेत्र सूचना का हो, व्यापार का हो, अपराध का हो, या मनोरंजन का हो। सूचना प्रौद्योगिकी का माध्यम इतना व्यापक है कि इसकी कोई भौगोलिक सीमा नहीं है यह सभी जगह उपलब्ध है। अग्नि और पहिए के अविष्कार ने मानव जीवन को जितना सशक्त बनाया उतना ही व्यापक परिवर्तन मानव जीवन में सूचना प्रौद्योगिकी के माध्यम से संभव हुआ है। सूचना प्रौद्योगिकी अपने अभिसारी रूप से सूचना प्रसार के विभिन्न विधियों को सम्मिलित करता है, जैसे—प्रिंट मीडिया, आकाषवाणी, दूरदर्शन, मोबाई, कम्प्यूटर एवं इंटरनेट।

## प्रस्तावना

साइबर का सामान्य अर्थ कम्प्यूटर, इंटरनेट और उससे संलग्न उपकरणों के प्रयोग से मनचाही जानकारी (सूचना) प्राप्त कराने वाला उपकरण या मार्ग है। वैज्ञानिक भाषा में समझने की कोशिश करें तो साइबर एक काल्पनिक माध्यम है जिससे गुजरकर वह समस्त जानकारी, जो हम चाहते हैं इंटरनेट व कम्प्यूटर उपकरणों का प्रयोग करते हुए हम तक पहुँचती है। कम्प्यूटर और इंटरनेट के सामंजस्य से मनचाही जानकारी जिस माध्यम से हम तक पहुँचती है, वह अंतरिक्ष में एक काल्पनिक स्पेस (खाली जगह) से होकर गुजरती हुई हम तक पलक झपकते पहुँचती है। यह काल्पनिक जगह साइबर स्पेस कहलाती है। जिसको हम बोलचाल में साइबर कहते हैं। और इसका जब दुरुपयोग होता है तब उसे साइबर काइम की संज्ञा दे दी जाती है और उस अपराध को जिस कानून में परिभाषित किया जाता है उसे साइबर लॉ कहा जाता है। जिस माध्यम से साइबर तंत्र संचालित होता है, उसे साइबरटेनिक्स कहते हैं।

अमेरिका के उच्चतम न्यायालय में ए०सी०एल०यू० बनाम रेबों में साइबर स्पेस की प्रकृति की वर्णन इस प्रकार किया है :-

“कोई भी व्यक्ति जो इंटरनेट तक पहुँच सकता है वह संचार एवं सूचना की विस्तृत विधियों का लाभ उठा सकता है। इन विधियों को निश्चित प्रकारों में विभाजित करना कठिन है। लेकिन, वर्तमान

में इनको मुख्य रूप से इलेक्ट्रॉनिक मेल, गुप्स, चैट रूम्स और वर्ल्ड वाइड वेब के रूप में जाना जाता है। इन सभी का प्रयोग किसी विषय, आवाज (वक्तव्य), तस्वीर एवं चलचित्र के प्रसारण हेतु किया जा सकता है। इन सभी को अगर साथ-साथ मिलाया जाये तो एक अद्भुत माध्यम तैयार होता है— जो (साइबर स्पेस) के नाम से जाना जाता है। जिसकी कोई भौगोलिक सीमा नहीं है बल्कि जो संसार में इंटरनेट के माध्यम से कहीं पर भी तथा किसी की भी पहुँच में है।”

प्रौद्योगिकी का उपयोग जितना मानव को सुखद बनाने के लिए अर्थात् सृजन और विकास के लिए किया जा सकता है उतना ही मानवता को नष्ट करने के लिए भी किया जा सकता है। सूचना प्रौद्योगिकी के साथ भी यह नियम लागू होता है। सूचना प्रौद्योगिकी के साथ-साथ साइबर काइम का उदय हुआ, जिसने अपराधशास्त्र में एक नये अध्याय को जन्म दिया। साइबर काइम में अपराधिक गतिविधि और विधि विरुद्ध कार्य जो कम्प्यूटर से सम्बन्धित है, सम्मिलित किया जा सकता है।

कम्प्यूटर मिसयुज एक्ट-1990 यू०के०1 के द्वारा साइबर काइम के स्रोत को परिभाषित किया गया है—

1. जब कोई व्यक्ति अनाधिकृत रूप से कम्प्यूटर प्रोग्राम या डाटा में पहुँचता है या पहुँचने का प्रयास करता है।
2. जब कोई व्यक्ति अनाधिकृत रूप से कम्प्यूटर के संरक्षित डाटा से कोई छेड़छाड़ या परिवर्तन करता है।



- जब कोई व्यक्ति नेटवर्क के संचार प्रणाली को किसी भी प्रकार से प्रभावित करता है।

यूरोपियन साइबर क्रिम ट्रीटी काउंसिल के अनुसार –

“साइबर क्रिम एक ऐसा अपराध है जो डेटा एवं कॉपीराइट के विरुद्ध की गयी अपराधिक गतिविधि है।”

कम्प्यूटर विज्ञानी जेवियर गीज के अनुसार –

“साइबर क्रिम कम्प्यूटर और इन्टरनेट के माध्यम से होने वाला अपराध है जिसके अन्तर्गत जालसाजी, ठगी और अनाधिकृत प्रवेश, चाइल्ड पोर्नोग्राफी और साइबर स्टाकिंग शामिल है।

संयुक्त राष्ट्र के कम्प्यूटर क्रिम कंट्रोल एण्ड प्रिवेंशन मेनुअल के अनुसार जालसाजी, ठगी और अनाधिकृत प्रवेश को साइबर क्रिम की परिभाषा में शामिल किया गया है। इस प्रकार हम कह सकते हैं कि ऐसा कोई अपराध जिसमें कम्प्यूटर इन्टरनेट नेटवर्क एवं हार्डवेयर तथा उससे संबंधित उपकरणों यथा स्कैनर, प्रिंटर आदि का उपयोग किया गया हो, साइबर क्रिम कहलाता है। साइबर क्रिम वह अवैधानिक कार्य है जिसमें कम्प्यूटर या तो औजार ;ज्ववसद्ध की तरह या लक्ष्य ;जंतहमजद्ध की तरह प्रयोग होता है अथवा दोनों ही तरह के प्रयोग होता है।

साइबर अपराध के अन्तर्गत परम्परागत और गैर परम्परागत दोनों तरह के अपराध किए जा सकते हैं। परम्परागत अपराध का आशय ऐसे अपराध से है जो सूचना प्रौद्योगिकी के पहले भी होते थे और जो अब कम्प्यूटर नेटवर्क में माध्यम से होते हैं। गैर परम्परागत अपराध सूचना प्रौद्योगिकी के अविष्कार के साथ शुरू हुआ।

इनको इस तरह से वर्गीकृत किया जा सकता है :-

## साइबर क्रिम

### (अ) परंपरागत अपराध :

- कम्प्यूटर नेटवर्क द्वारा वित्तीय अपराध
- साइबर पोर्नोग्राफी (अश्लीलता)
- ऑन लाइन गैम्बलिंग (जुआ)
- बौद्धिक सम्पदा सम्बन्धित अपराध
- कपट
- मानहानि
- कम्प्यूटर नेटवर्क के माध्यम से धमकी

### (ब) गैर परम्परागत अपराध

- ई-मेल स्फूफिंग
- बेव डिफेंसमेन्ट (नष्ट कर देना)
- ई-मेल बूमलिंग

- वायरस / वार्म अटैक (हमला)
- इन्टरनेट टाइमिंग थीफ (समय की चोरी)
- बेव जैकिंग (वेब पर कब्जा)

साइबर क्रिम को व्यापक रूप से इस प्रकार वर्गीकृत किया जा सकता है।

**1. व्यक्ति के विरुद्ध :-** ई-मेल स्फूफिंग, कम्प्यूटर नेटवर्क के माध्यम से धमकी, कपट, मानहानि के द्वारा, **2. व्यक्ति सम्पत्ति के विरुद्ध :-** वायरा/वार्म अटैक, वेब जैकिंग (वेब पर कब्जा), बौद्धिक सम्पदा सम्बन्धी अपराध, **3. संगठन के विरुद्ध :-** अनाधिकृत रूप से कम्प्यूटर सिस्टम पर कब्जा करना (हैकिंग), साइबर आतंकवाद, अनाधिकृत रूप से साफ्टवेयर का वितरण, **4. सम्पूर्ण समाज के विरुद्ध :-** साइबर पोर्नोग्राफी, आर्थिक अपराध, अनाधिकृत रूप से आर्टिकल को बेचना, ऑन-लाईन गैम्बलिंग।

साइबर क्रिम के बढ़ते चुनौतियों से निपटने के लिए भारतीय संसद ने सूचना प्रौद्योगिकी अधिनियम –2003 पारित किया, सूचना प्रौद्योगिकी अधिनियम में साइबर क्रिम की परिभाषा और उसके लिए समुचित दण्ड की व्यवस्था की है जो पूर्वपृष्ठ पर दिया गया है।

साइबर अपराधों के रूप में हमारे समाज को एक ऐसे खतरे का सामना करना पड़ रहा है, जिससे निपटने के लिए न तो पर्याप्त कानून हैं, न तपतीष की उचित तकनीक और न ही उनको लागू करने वाले प्रशिक्षित लोग। दिल्ली के छात्रों का मामला तो संयोग से प्रकाश में आ गया। उनकी अश्लील हरकतों को यदि वेबसाइटपर खरीद-फरोख्त के लिए रखा गया होता, तो शायद ही यह मामला सबके सामने आ पाता। अपराधियों को इसमें गोपनीयता का सुरक्षा कवच स्वतः ही प्राप्त हो जाता है, जिसे भेदना अत्यंत कठिन होता है वे न केवल अश्लील सूचनाओं का संगठित व्यापार कर रहे हैं, बल्कि धड़ल्ले से दूसरों के बैंक खातों से रूपये भी उड़ा रहे हैं और इस तरह के दूसरे अन्य अपराध कर रहे हैं, जिनकी कल्पना भी नहीं की जा सकती।

उपरोक्त प्रकार के साइबर क्रिम परम्परागत अपराधिक न्याय प्रशासन के लिए एक नई चुनौती प्रस्तुत कर रहे हैं, चुनौती हमेशा विकास और समस्या समाधान के लिए प्रेरित करती है न्याय प्रशासन को भी इस चुनौती से निपटने के लिए अपने को तकनीक रूप से सक्षम बनना होगा और न्याय प्रशासन के सभी अंग चाहे पुलिस, अभियोजन, न्यायालय और जेल में अधिकारियों और कर्मचारियों को तकनीक रूप से सक्षम बनना होगा तभी वे इस नयी समस्या का सामना कर पायेंगे।

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धारा	अपराध	दण्ड
65	कम्प्यूटर स्रोत दस्तावेज के साथ हस्तक्षेप	3 वर्ष तक कारावास / 2 लाख तक जुर्माना या दोनो
66	कम्प्यूटर सिस्टम को काटना	3 वर्ष तक का कैद / एक लाख जुर्माना या दोनो
67	अश्लील सूचना को प्रसारित (पोरनोग्राफी) करना ।	10 वर्ष तक कैद / 20 लाख जुर्माना या दोनो
68	कन्ट्रोलर के आदेश द्वारा प्रमाणन प्राधिकारी अथवा किसी कर्मचारी के आदेश में विनिर्दिष्ट ऐसी कार्यवाहियाँ पर कार्यवाही करने अथवा रोकने के आदेश पालन करने में असफल रहता है ।	3 वर्ष तक के कारावास या दो लाख का जुर्माना या दोनो
69	कम्प्यूटर स्रोत का भार साधक कोई व्यक्ति जब धारा-69(1) के अधीन बुलाया जाता है तो सूचना की बुराईयों को दूर करने में उसे सभी सुविधाएँ और तकनीक सहायता देने में असफलता होती है।	7 वर्ष तक कारावास
70	जो कोई संरक्षित व्यवस्था तक पहुँचेगा या पहुँचने का प्रयत्न करेगा ।	10 वर्ष तक कारावास और जुर्माना
71	जो कोई कन्ट्रोलर अथवा प्रमाणन अधिकारी से लाइसेंस अथवा डिजिटल हस्ताक्षर प्रमाण पत्र प्राप्त करने के लिए दुव्यापदेशन करेगा अथवा किसी तथ्य को दिखायेगा ।	3 वर्ष तक की कैद और एक लाख तक का जुर्माना ।
72	जो कोई गोपनीय और एकान्तता को भंग करेगा	3 वर्ष तक कारावास और एक लाख का जुर्माना या दोनो

73	कोई भी व्यक्ति डिजिटल हस्ताक्षर प्रमाण पत्र गलत विषयों से प्रकाशित करेगा ।	दो वर्ष तक की कैद या एक लाख तक का जुर्माना से दण्डित: किया जायेगा ।
74	डिजिटल हस्ताक्षर प्रमाण पत्र का कपट करने के प्रयोजन से प्रकाशित करना ।	दो वर्ष तक की कैद या एक लाख तक का जुर्माना ।
43	कम्प्यूटर कम्प्यूटर तंत्र की नुकसानी के लिए शासित	1 करोड़ तक
44 (क)	कोई दस्तावेज अथवा रिपोर्ट प्रमाणन अधिकारी के देने में असफलता	1,50,000 /—
44 (ख)	विनिर्दिष्ट समय के भीतर, कोई सूचना पुस्तिका या दस्तावेज दिये जाने में असफल रहता है।	5000 /— असफलता के प्रत्येक दिन के लिए
44 (ग)	यदि स्रोत या स्रोत का रिकॉर्ड रखने में असफलता	100000 प्रति दिन
45	जो किन्हीं नियमों अथवा सूचना प्रौद्योगिकी अधिनियम के आधीन बनाये गये विनियमों का उल्लंघन करता है। जिसके लिए शासित पृथक रूप से उपबंधित नहीं है वह ऐसे उल्लंघन के लिए प्रतिकार	25000 तक भुगतान करने का जिम्मेदार होना ।

# पठन में स्कीमा सिद्धान्त का अनुप्रयोग

श्रीमती विदिती रस्तोगी  
प्रवक्ता

## सार

‘स्कीमा’ शब्द का प्रयोग सर्वप्रथम मनोविज्ञान में किया गया। मनोविज्ञान में ‘स्कीमा’ का अर्थ – “पूर्व प्रतिक्रियाओं या अनुभवों का सक्रिय संगठन।” यह माना जाता है कि लिखित विषयवस्तु स्वयं अपने द्वारा अर्थ ग्रहण नहीं करती बल्कि इससे अर्थ ग्रहण करने की प्रक्रिया में पाठक अपने पूर्व अर्जित ज्ञान का प्रयोग करता है। इस प्रकार एक पाठक किसी पाठ्यवस्तु से अर्थ का निर्माण करने में स्कीमा सिद्धान्त का उपयोग करता है। अतः पठन क्रिया में स्कीमा सिद्धान्त की भूमिका को नज़रअंदाज नहीं किया जा सकता।

**मुख्य शब्दावली** – स्कीमा, स्कीमा सिद्धान्त, पठन, स्कीमा सक्रियण, स्कीमा प्रारम्भ मनोविज्ञान विशय के दर्शनशास्त्र से पृथक होने से पहले ‘स्कीमा’ शब्द पर इमेनुअल कान्ट द्वारा दर्शनशास्त्र में चर्चा की गयी। मनोविज्ञान विशय के विकासपील अवस्था में सर्वप्रथम जिन प्याजे ने 1923 में मनोविज्ञान में ‘स्कीमा’ शब्द का प्रयोग किया। फ्रेडरिक बरलेट ने इस अवधारणा का मनोविज्ञान के साथ-साथ शिक्षा में भी प्रयोग किया। शिक्षा मनोवैज्ञानिक रिचर्ड सी0 एन्डरसन ने इस अवधारणा से स्कीमा सिद्धान्त का विकास किया। पहले ‘स्कीमा’ के लिए ‘प्रारूप’, ‘तित्तमद्द’, ‘योजना’, ‘बीमउमद्द’, ‘दृष्य’, ‘बमदमद्द’ या ‘कथानक’ , ‘बतपचजद्द’ शब्दों का प्रयोग किया जाता था।

## स्कीमा का अर्थ एवं परिभाषाएँ

मनोविज्ञान व संज्ञानात्मक विज्ञान के अनुसार स्कीमा विचारों या व्यवहारों का एक ऐसा प्रतिरूप, चंजजमतदद्द है जो विभिन्न सूचनाओं और उनके बीच सम्बन्धों को व्यवस्थित करता है। कैनटियन ज्ञानमीमांसा के अनुसार स्कीमा एक ऐसी अवधारणा है, जो सार्वभौमिक ज्ञान के समान है परन्तु किसी घटना या तथ्य के ज्ञान तक ही सीमित है, जिससे उस घटना के वास्तविक कारण को समझा जा सकता है।

**बरलेट के अनुसार** – “स्कीमा पूर्व प्रतिक्रियाओं या अनुभवों का सक्रिय संगठन है।”

**रॉमेलहाल्ट के अनुसार** – “स्कीमा स्मृति में संग्रहित आनुवंशिक अवधारणाओं का प्रतिनिधित्व करने वाले आँकड़ों की संरचना है।”

**एण्डरसन और पिर्यसन के अनुसार** – “स्कीमा एक अमूर्त ज्ञान संरचना है।”

**मेडिन व रॉस के अनुसार** – “स्कीमा समझ के लिए प्रयोग किए गए सामान्य ज्ञान की संरचना है।”

## स्कीमा के प्रकार

विषयवस्तु की प्रकृति के अनुसार – स्कीमा या स्कीमेटा के कई प्रकार सुझाए गए हैं, जो कि इस प्रकार हैं –

- औपचारिक स्कीमा** – औपचारिक स्कीमा से तात्पर्य विभिन्न प्रकार की पाठ्यवस्तुओं की औपचारिक, परम्परागत व संगठनात्मक संरचनाओं के पृष्ठभूमिक ज्ञान से है। विभिन्न प्रकार की विषयवस्तुओं जैसे – कहानियों, वर्णनों, पत्रों, कविताओं आदि को उनकी संरचनाओं के आधार पर ही पहचाना जाता है। पढ़ते समय इन संरचनाओं के ज्ञान की कमी अर्थग्राह्यता में समस्या उत्पन्न करती है।
- विषयवस्तु स्कीमा** – विषयवस्तु स्कीमा से तात्पर्य, विषयवस्तु सम्बन्धी पृष्ठभूमिक ज्ञान से है। इसके अन्तर्गत

सामान्यतया किसी विषयवस्तु का अवधारणात्मक ज्ञान आता है। उदाहरण के लिए रेस्टॉरेंट में जाने सम्बन्धी स्कीमा में रेस्टॉरेंट में उपलब्ध सेवाएँ, मेन्यू, व्यंजनों का आदेश, बिल-भुगतान आदि सूचनाएँ सम्मिलित होंगी।

- 3 **सांस्कृतिक स्कीमा** — एक विषय समूह के सदस्यों के विधास, अभिवृत्तियाँ, रीति-रिवाज, व्यवहार और सामाजिक आदतें उस समूह विषय की संस्कृति कहलाती हैं। एक ही विषयवस्तु की विभिन्न सांस्कृतिक समूह अलग-अलग व्याख्या करते हैं। विषयवस्तु की सही अर्थग्राह्यता के लिए उस विषिष्ट संस्कृति की जानकारी आवश्यक है, जिस पर वह विषयवस्तु आधारित है।
- 4 **भाषायी स्कीमा** — भाषायी स्कीमा से तात्पर्य भाषा विषय की व्याकरण और उसके शब्द भण्डार के ज्ञान से है। किसी भी विषयवस्तु की अर्थग्राह्यता में इसकी महत्वपूर्ण भूमिका है। कुशल पाठक वही है, जो विषयवस्तु को उचित प्रकार डिकोड कर सके व उससे सही अर्थ ग्रहण कर सके। भाषायी स्कीमा के अभाव में उचित अर्थग्राह्यता असंभव है।

### स्कीमा सिद्धान्त का विकास (समन्वित स्कीमा शिक्षण प्रतिमान)

80 के दशक में स्कीमा सिद्धान्त को समन्वित स्कीमा शिक्षण प्रतिमान (Integral Schema Teaching Model) के नाम से जाना जाता था। समन्वित स्कीमा शिक्षण मॉडल के अनुसार स्कीमा का अर्थ इस तथ्य पर आधारित है कि सभी प्रकार के ज्ञान या जानकारी को संज्ञान में कुछ निश्चित इकाइयों और ब्लॉक में समूहबद्ध किया जा सकता है। बड़ा स्कीमा छोटे स्कीमा को और छोटा स्कीमा उससे भी छोटे स्कीमा को सम्मिलित करता है, इसलिए स्कीमेटा श्रेणीबद्ध है।

समन्वित स्कीमा शिक्षण प्रतिमान का पठन-क्रिया में अनुप्रयोग —

**लियू लॉगगन** के अनुसार पठन-शिक्षण में अधिकांश ध्यान पठन सामग्री के भाषायी प्रारूप पर दिया जाता है और विद्यार्थियों व उनकी पृष्ठभूमिक ज्ञान की भूमिका को नज़रअंदाज कर दिया जाता है। इस कारण विद्यार्थी की पठन क्षमता का विकास अवरुद्ध हो जाता है। समन्वित स्कीमा शिक्षण प्रतिमान इस बात पर बल देता है कि पठन क्रिया पाठक और लेखक के बीच एक सकारात्मक अन्तःप्रेषण है। यह मॉडल पठन की अर्थग्राह्यता में पाठक की पृष्ठभूमिक ज्ञान की भूमिका को महत्व देता है। गुलियन ब्राउन के अनुसार पठन के दौरान व्याख्या या अर्थ-निर्माण, निष्कर्षों के आधार पर किया जाता है और निष्कर्ष, पूर्व-अनुभवों के आधार पर या समरूप पाठ के आधार पर निकाले जाते हैं। ये नवीन व्याख्याएँ निरन्तर विचारों के पुराने मैट्रिक्स में संयोजित होते हुए उस मैट्रिक्स को पुनः निर्मित करती हैं।

आधुनिक संज्ञानात्मक मनोविज्ञान के स्कीमा सिद्धान्त के अनुसार जब स्कीमा निर्मित होता है और दीर्घ त्रिविमीय स्कीमा जाल में विकसित होता है, तब ही मनुष्य का ज्ञान दीर्घ अवधि स्मृति में

विद्यमान हो पाता है।

### स्कीमा सिद्धान्त

इस सिद्धान्त के अनुसार, एक मनुष्य का स्कीमेटा श्रेणीबद्ध रूप (पमतंतबीपबंस उंददमतद्व से व्यवस्थित होता है। इस श्रेणीबद्ध रूप में सामान्य ज्ञान व जानकारीयों धरातल पर व्यवस्थित होती हैं।

स्कीमा सिद्धान्त के अनुसार, मनुष्य अपनी स्मृति में संग्रहित स्कीमेटा या मानसिक प्रारूपों को सक्रिय कर नवीन अनुभवों को अर्थ प्रदान करता है। नए अनुभव और सूचनाएँ उनके स्किमेटा में जिस प्रकार फिट या समायोजित होते हैं, उसी अनुरूप उनकी व्याख्या की जाती है। जो सूचनाएँ स्किमेटा में फिट नहीं हो पाती, वे सही रूप में नहीं समझी जा सकती।

### स्कीमा सिद्धान्त का पठन में अनुप्रयोग

**रुमेलहॉल्ट के अनुसार** — “स्कीमा सिद्धान्त इस बात की व्याख्या करता है — पाठक पाठ को समझने व सीखने में अपने पूर्व ज्ञान का प्रयोग कैसे करते हैं।” इस प्रकार स्कीमा सिद्धान्त यह मानता है कि लिखित विषयवस्तु स्वयं अर्थ ग्रहण नहीं कराती बल्कि यह पाठकों को केवल यह दिशा निर्देश देती है कि वे अपने पूर्व अर्जित ज्ञान से किस प्रकार अर्थ का निर्माण करते हैं। इस सिद्धान्त के अनुसार विषयवस्तु की अर्थग्राह्यता की प्रक्रिया में पाठक के पृष्ठभूमिक ज्ञान एवं विषयवस्तु के बीच अन्तः क्रियात्मक प्रक्रिया होती है। कुशल अर्थग्राह्यता के लिए एक व्यक्ति को अपने ज्ञान को विषय सामग्री के साथ सम्बन्धित करने की आवश्यकता होती है।

पठन के दौरान अर्थग्राह्यता की प्रक्रिया दो दिशाओं में चलती है —

- (अ) **श्रेणीबद्ध व्यवस्था में धरातल से शीर्ष की ओर (विशिष्ट से सामान्य की ओर)** — इस प्रक्रिया में विषयवस्तु के विशिष्ट आँकड़ें व सूचनाएँ सक्रिय होती हैं।
- (ब) **श्रेणीबद्ध व्यवस्था में शीर्ष से धरातल की ओर (सामान्य से विशिष्ट की ओर)** — यह प्रक्रिया सामान्य नियमों से शुरू होती है और अन्त में विशिष्ट भविष्यवाणियों की पुष्टि करती है।

पठन के दौरान अर्थग्राह्यता हेतु स्कीमेटा सम्बन्धी कुछ प्रक्रियाएँ होती हैं, जिनका विवरण निम्न प्रकार है —

#### 1. स्कीमा सक्रियण (Schema Activation)

स्कीमा सक्रियण एक ऐसी प्रक्रिया है जिसमें विषयवस्तु सम्बन्धी कुछ उद्दीपक पाठक को पठन कार्य करते समय अपनी स्मृति में से प्रासंगिक स्कीमा को दूँढ़ने और उन्हें जागृत करने के लिए दिशा — निर्देश देते हैं। स्कीमा सक्रियण की एक अवधारणा यह है कि



कुछ शब्द, शब्दों का समूह या पाठ का शीर्षक अत्याधिक विचारोत्तेजक होते हैं और एक निश्चित स्कीमा की ओर संकेत करते हैं।

विषयवस्तु सम्बन्धी उद्दीपक स्कीमा को दो प्रकार से प्रभावित करते हैं –

- (अ) यदि एक उद्दीपक एक विशिष्ट स्कीमा के लिए अत्याधिक विचारोत्तेजक है, तो वह स्कीमा पूर्ण रूप से सक्रिय हो सकता है। उदाहरण के लिए 'अग्निशामक' के उल्लेख मात्र से ही 'आग दुर्घटना' सम्बन्धी स्कीमा एक बार में ही पूर्ण सक्रिय हो जाता है और इसके लिए अन्य उद्दीपकों की आवश्यकता नहीं पड़ती।
- (ब) परन्तु कई बार ऐसा नहीं होता। यदि एक उद्दीपक पूर्ण स्कीमा सक्रियण के लिए अपर्याप्त है और वह केवल एक ऐसे भाग/अंश की याद दिलाता है जो अलग-अलग कई स्कीमेटा में फिट हो सकता है, तो ऐसी परिस्थिति में सही स्कीमा सक्रियण हेतु अन्य उद्दीपक भी देने पड़ते हैं। उदाहरण के लिए – 'अम्ल' उद्दीपक का उल्लेख कई स्कीमेटा जैसे – अम्ल वर्षा स्कीमा, खाद्य प्रसंस्करण क्रिया स्कीमा इत्यादि की ओर संकेत करता है। परन्तु यदि अम्ल के अतिरिक्त अन्य उद्दीपक, जैसे टेस्टट्यूब, बर्नर आदि भी उपस्थित किए जाए तो 'रसायन प्रयोगशाला' स्कीमा के सक्रिय होने की सम्भावना बढ़ जाती है।

## 2 स्कीमा प्रारम्भ (Schema Instantiation)

स्कीमेटा सम्बन्धी एक दूसरी प्रक्रिया स्कीमा प्रारम्भ है। स्कीमा प्रारम्भ का अर्थ है – सामान्य, अमूर्त व अपरम्परागत स्कीमेटा का पाठक द्वारा विशिष्ट प्रस्तुतीकरण। पठन के दौरान एक पाठक प्रासंगिक स्कीमा और संदेश या विशयवस्तु में दिए शब्दों के बीच सम्बन्ध निर्माण की प्रक्रिया में लगा रहता है। स्कीमेटा के रिक्त भागों को भरने के लिए आवश्यक शब्द सदैव संदेश में नहीं पाए जाते। लेकिन जब पाठक के द्वारा स्कीमेटा के रिक्त भाग पर्याप्त विशिष्ट उदाहरणों या विशिष्ट परिस्थितियों से भर दिए जाते हैं तब यह कहा जाता है कि स्कीमा का प्रारम्भ हो गया है। ऐसा माना जाता है कि जब तक स्कीमा का प्रारम्भ नहीं होता, तब तक संदेश में दिया गया अर्थ ग्रहण नहीं किया जा सकता और न ही वह अर्थ स्थायी होता है। दूसरे शब्दों में एक संदेश की अर्थग्राह्यता में पाठक के आन्तरिक स्कीमेटा व संदेश दोनों की अन्तः क्रिया से सूचनाएँ निकाली जाती है और ये सूचनाएँ तब तक निकाली जाती हैं, जब तक कि स्कीमा का पुनः सामंजस्य नहीं हो जाता।

इस प्रकार हम कह सकते हैं कि पठन क्रिया में स्कीमा के मुख्यतः तीन कार्य हैं –

अनुमान कार्य (Anticipation Function) – पठन के दौरान स्कीमा सिद्धान्त का प्रयोग कर पाठक विषयवस्तु के प्रकार, विषयवस्तु के सन्दर्भ व विभिन्न प्रकार की विषयवस्तुओं के शीर्षकों के बारे में अनुमान लगाते हैं।

अनुपूरक कार्य (Supplementary Function) – जब पाठक, पाठ्य सामग्री में यह पाते हैं कि निश्चित, विशिष्ट या आवश्यक सूचना अपर्याप्त है, तब वे पढ़ते समय सम्बद्ध स्कीमा को सक्रिय करते हैं और पाठ्य सामग्री से सम्बन्धित आवश्यक सूचनाओं की पूर्ति करते हैं।

चयन कार्य (Selective Function) – पढ़ते समय जब स्कीमा सक्रिय हो जाता है तब पाठक, पाठ्य सामग्री की व्याख्या करने के लिए लगातार अपने स्कीमा जाल से उपयुक्त अंश का चयन करता है। साथ ही जब पठन कार्य समाप्त हो जाता है तब स्कीमा पाठक को पठन में प्रयुक्त अपने साधनों को छोटने में मदद करता है।

उपरोक्त तीनों कार्य एक-दूसरे से सम्बन्धित हैं और विषयवस्तु को समझने के लिए एक साथ कार्य करते हैं। निष्कर्षतः यह कहा जा सकता है कि स्कीमा सिद्धान्त के अनुसार पठन एक अन्तः क्रियात्मक प्रक्रिया है। यह अन्तः क्रिया तीन स्तरों पर होती है –

- (अ) धरातल से शीर्ष व शीर्ष से धरातल प्रक्रियाओं के बीच अन्तः क्रिया
- (ब) निम्न स्तर व उच्च स्तर कौशलों के बीच अन्तः क्रिया
- (स) पाठ्य सामग्री के अनुमानित पृष्ठभूमिक ज्ञान एवं पाठक के वास्तविक पृष्ठभूमिक ज्ञान के बीच अन्तः क्रिया इस प्रकार स्कीमा सिद्धान्त पाठकों को उनके नए अनुभवों के अर्थ निर्माण हेतु दिशा-निर्देशित करता है और उन्हें दी विषयवस्तु में अपेक्षित अनुभवों के बारे में अनुमान लगाने में सक्षम बनाता है।

वेबसाइट एवं ई-सन्दर्भ –

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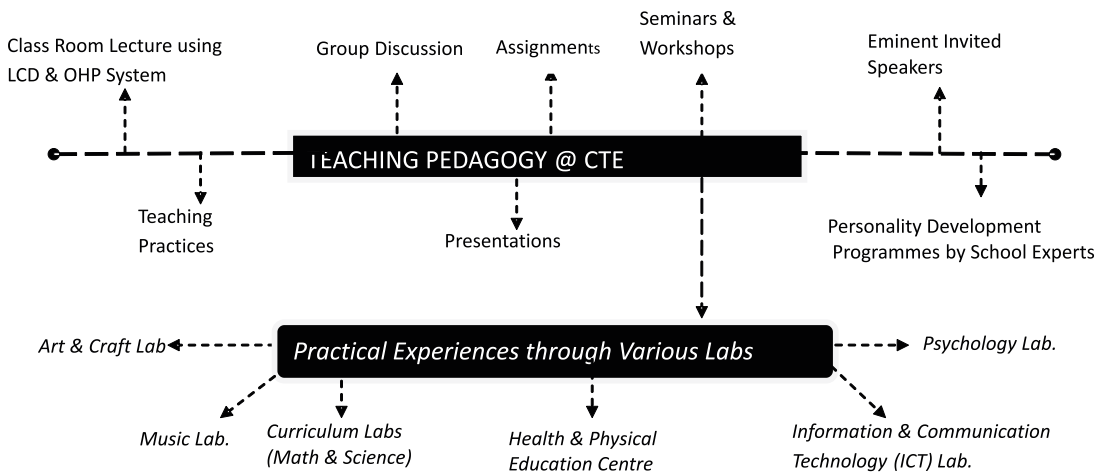
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