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*INCORPORATING THE SMART BOARD FOR SMART TEACHING*

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**Introduction:**

The smart board is a series of interactive white boards developed and trademarked by Smart Technologies. The smart board uses touch to command it in the same way that a regular computer would depend on a mouse or keyboard for scrolling, clicking, opening documents, etc... A projector is used along with a computer in order to project images onto the smart board, and then it is completely touch screen. The smart board typically comes with four pens that use digital ink in the same way that a regular white board would use dry erase markers; it also comes with an eraser that works the same as any other eraser. The software that is used with the smart board is Smart Notebook Collaborative Learning software, which includes math tools, mapping tools, student tools, Smart response using a clicker, and many more options. Other software that you can use with the Smart board are Microsoft word, excel, and PowerPoint. Uses for the Smart board include teaching, business meetings, training, and giving presentations.

Interactive whiteboards are the future of educational strategies, and without proper adoption of these and other technology tools, teachers are doomed to become dinosaurs in their practices. Unquestionably, the use of the interactive whiteboard and its voter-response technology is a true breakthrough in education. As a teacher educator I also constantly assess my teaching strategies. I found that teaching with SMART board is reactive and long life for students and a great contented experience for teachers.

The interactive electronic whiteboard is great for demonstrations....

- The interactive electronic whiteboard is a colourful tool. Research indicates that students respond to displays where colour is employed.
- The board can accommodate different learning styles.
- Distance learning is an excellent setting for interactive whiteboard use.
- One-computer classrooms can maximize the use of limited computer access.

- The interactive whiteboard is an excellent tool for the constructivist educator.
- Students with limited motor skills can enjoy board use.
- The board is great for meetings and lessons where the participants need printed copies.
- Learners show increased motivation and enjoy the interaction the technology offers.
- The teacher at the front of the class and the whole class engaged together.
- It gives the teacher instant access to a vast array of electronic resources.
- It enables seamless links to be made between the technology and the subject material.
- The flexibility and the scope for imaginative lesson planning is huge.
- Pages can automatically be saved and can be printed, emailed or even pasted into a website.

**Importance of using SMART board:**

- Smart boards can pretty much be used for anything in the classroom. As seen the Smart board in the Music Classroom, the teacher was able to pull all kinds of media into her lesson and allow her students to be involved as well; it made learning more immediate for the students. No longer do teachers have to fumble around looking for posters and external media sources.
- Smart boards can also be used in the science classroom where Smart boards are able to build confidence in science. The Smart board helps teachers show results of investigations, helps guide children's investigations, and promotes visual observation skills, which are important skills and outcomes of science learning.
- Smart boards are especially useful in classrooms with students who have learning disabilities. Smart boards allow these students to show their teacher what they know as opposed to trying to dictate what they know, which is helpful especially with autistic children because some of them do not talk. Smart board allows the students to do the same thing which helps a lot with the problem of language barriers between student and teacher.
- Overall the smart board can be used in every classroom and has benefits for all students of different learning styles and levels. These benefits include the smart board being able to accommodate students of all learning styles especially increased support for visual learners, it increases engagement in the learning process, and its ability to

show information in a large format that way all students can see and be involved. These benefits are not only for students but for teachers as well, teachers are able to embed all kinds of media into their lessons with the smart board software, they are also able to get their students more engaged which means higher grades on assessments, and they are able to increase the creativity of the lessons that they are teaching their students.

### **Using the SMART Board in the Higher Education Classroom:**

By using SMART board for higher education and discussed with students I found that incorporating technology on a regular basis improves instruction. My students say that classroom instruction is more organized and that they receive more attention from the instructor during technology integrated lessons. The students have also said that they view using the SMART Board as a reward and tend to behave better during these instruction times.

Students enjoys the time you are able to spend one-on-one when others are doing projects on the computer or SMART Board.

- Student told me that when you use the "smart board" he tends to pay attention more and is able to stay on task more often.
- Students prefer teaching by SMART board because the teacher is able to hand over responsibility to the students.

### **Teachers' Perceptions Regarding the Use of the Interactive Electronic Whiteboard:**

Teachers of the schools which are using SMART board told that Smart Boards are becoming an essential component of every classroom. Some observation and opinion of teachers by using SMART board are as under,

- It can accommodate different learning styles. Tactical learners can use the screen and learn by touching and marking at the board, audio learners can have a discussion and visual learners can observe the teaching on the board.
- It is neater and does not have the cleanliness hassle and is therefore easier to maintain.

Most teachers understand the “why” but struggle with the “how”. Here are some ideas on how you can use Smart Boards.

- Use it as a tool for note-taking. Students can come and write important points on the board. Alternately, you can appoint a student to type out notes on the computer while you talk, so that the other students can view and take them down.
- Brainstorming in the classroom can be fun with a Smart Board. You can not only put together text/ ideas but also images, diagrams or videos.
- Classroom games can be played with ease on the board. Board games in particular can be played on the board itself.
- A lot of new software is available for free on the internet that can be easily integrated. The Smart Board is tomorrow’s technology and is bound to change the look of classrooms forever.
- All staff that used the Whiteboard was extremely enthusiastic about the possibilities of the technology and a lot were inspired to use ICT more in their lessons and were given confidence by the fact that the Whiteboard was reliable and easy to use.
- The interactive whiteboard is an effective medium for teacher input to the whole class, and for reviewing the lesson. The teacher is able to present from the front, and is better positioned to observe pupils' response.
- Statistically significant improvement in student attitudes towards both using computers in instruction and towards writing instruction.
- The special needs teacher noted that the most significant attribute was the attention and motivation the students had when working with the board. During the course of the study, there was no diminishment in enthusiasm and the students continued to want to complete most tasks using the board. The collaborative interaction within the group improved over time. This sustained motivation and persistence with the use of the board are the two key factors in aiding with learning outcomes.
- In the academic setting, they yielded significant increases in their self-esteem, appropriate peer relations, and overall self worth.
- Students were motivated and said that their learning had benefited from the use of the Whiteboard. They liked the idea of being able to see what they were supposed to be doing rather than being shown on their own computer. This links in with accelerated

learning techniques involving visual rather than verbal instruction. The students said their attention was more focussed from having a large focal point and colour image within the room.

**Conclusion:**

Technology, ever changing, has become more accessible to teachers in the last few years. Teachers need to be able to use technology to increase their professional development and to have positive contact with students on a regular basis. Researcher discussed and illustrated the positive effects of using a SMART Board interactive whiteboard in higher education classroom. Incorporating this interactive technology increased student contact time and decreased behavioural issues.

Through this study I have learned that using the Smart board in your classroom is one of the most important technology tools you can use. Not only does the usage of the smart board benefit the students but it also has benefits for the teacher as well. I think that the Smart board will greatly improve children's learning in the future because it is so versatile.

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*ICT ENABLED PACKAGE FOR ENHANCING ACADEMIC PERFORMANCE  
AMONG STUDENTS WITH SPECIFIC  
LEARNING DISABILITIES*

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**Introduction**

Today, the educational scenario in India is meretricious. We speak of education for all: but in reality a majority of the students remain academically backward. Their number is alarmingly high at all stages of education. Education is thus the monopoly of a handful of able students and the low performing students labeled as the 'learning disadvantage' becomes ossified.

The learning disabled student was often been referred to as an individual with an "**invisible handicap**". The learning disabled child usually appears normal in every respect, except for the fact that his/her learning difficulties limit progress in school.

Learning Disabilities (LD) concern a specific group of handicapped children and youth. Education for all Handicapped Children Act defines Learning Disability (LD) as Specific Learning Disabilities (SLD) means a disorder in one or more of the basic psychological processes involved in/or in using language, spoken or written, which, may manifest themselves in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, dyslexia and developmental aphasia.

The 86<sup>th</sup> Amendment in the Constitution declaring elementary education the fundamental right of every child mandates the government to ensure that all children, including children with disabilities has access to education, and needed support must be provided. The SarvaSikshaAbhiyan (SSA) aims to provide useful and relevant elementary education to all children including children with disabilities in the age range of 6-14 years by 2010. The person with Disability Act (1995) makes it

mandatory on the part of government to provide needed educational facilities for the disabled. SSA programme lays special thrust on making education at the elementary level useful and relevant for children by improving the curricula, child centered activities and effective teaching learning strategies. It ensures that every child with special needs, irrespective of the kind, category and degree of disability, is provided education in an appropriate environment. It adopts "**Zero rejection**" policy so that no child is left out of the education system.

Children with Learning Disability are the children with special need. Once LD is identified, the categories of assistance such as psychosocial, technological and educational are to be provided. In educational programmes, children must be provided optimum educational experiences and remediation to overcome their lacunae. The broader group of students with learning problem can often be handled through consulting teachers, the education of regular teachers or modification of the elementary school curriculum, whereas the specific learning disabled child usually require intensive remedial assistance. The ICT enabled instructional design based learning package which is in Compact Disk form can meet the learning requirements for students to minimize LD in the learner centered learning environment. The practice of tracking by grouping students of similar achievement for instruction, and classroom instruction will more appropriately tailored to students' needs will experience more rapid achievement growth in both high and low-track students. It is in this context the present study focused to develop a remedial tracking package based on ICT enabled instructional design for students with LD.

### **Objectives**

- To develop ICT enabled interventions for enhancing academic performance among students SLD.
- To find out the significant difference if any in the level of academic performance at the initial, middle, and final stages of interventions among students with SLD totally and dimension wise on subsamples - Boys / Girls, State / CBSE Schemes

### **Hypothesis**



- There will be significant difference in academic performance among students with SLD before and after the implementation of ICT enabled interventions on subsamples- Boys / Girls, State / CBSE Schemes

### **Methodology**

For the present study, the Investigator selected Survey cum experimental method to collect data from Primary School Students belonging to different scheme of study (State/ CBSE) where both Learning disabled and non-disabled children were studying together. One group Pre-test Post-test Design was selected for the study. The sample comprising 39 students aged 8-10 years with Specific Learning Disabilities (SLD) from CBSE and State syllabus followed Primary Schools of Selected Districts of Kerala and the districts were selected through sampling technique. The samples were selected according to inclusion and exclusion criteria. The tools used are interventions, inventories, performance test and intelligence test.

ICT enabled intervention package consisted four phases such as preparatory phase, visual phase, auditory phase, visual kinaesthetic phase, integrated phase. The intervention package altogether focusing the enhancement of the process involved in visual and auditory perceptions, viz. 1. Eye-Hand Co-ordination (EHC), 2. Figure Ground Perception (FGP), 3. Figure Constancy (FC), 4. Position -in- Space (PS), 5. Spatial Relations (SR), 6. Auditory Perception (AP), (Four areas, from subtest no. 7 to 10 represent the aspects of cognitive functioning.), 7. Memory (M), 8. Cognitive Abilities (CA), 9. Receptive Language (RL), 10. Expressive language (EL).

### **Data Analysis and Interpretation**

The Investigator administered the diagnostic test of LD among the students with SLD at the three stages of package at different intervals of time. The Mean and SD of the scores were calculated.

To see whether the variations in LD after the implementation of package at different stages – initial, middle and final, is significant or not, one-way repeated-measures ANOVA (Greenhouse – Geisser corrected values) was done and by taking two (pair) at a time the Post hoc test (pair-wise multiple comparison with Bonferroni

correction) was also done and is given in the following table. The details of analysis are given below:

**(i) Effectiveness of ICT enabled package on overall aspects of LD for total sample**

The scores on overall aspects of LD collected at different intervals were analysed for the total sample and tabulated as shown below.

**Table 1 : Summary of one-way repeated - measures ANOVA and Post hoc Test with Bonferroni correction on overall aspects of LD for the total sample**

Category	Stages	Mean	SD	N	F#	Pair	Mean Diff.	LS \$
Total	Initial	33.4	2.8	39	502.91 **	D1 & D2	11.0	S*
	Middle	44.4	4.3	39		D1 & D3	17.5	S*
	Final	50.8	4.9	39		D2 & D3	6.5	S*

D1- Initial Stage, D2- Middle Stage, D3- Final Stage, \*\*- Significant at 0.01 level, \*- Significant at 0.05 level, #- One-Way Repeated Measures ANOVA (Greenhouse-Geisser corrected values,  $df=N-1$ , \$ - Pair - wise multiple comparison with Bonferroni correction

The mean scores regarding all aspects of Learning Disability at different intervals of time such as, before the implementation of intervention package, middle and after the implementation are respectively 33.4, 44.4 and 50.8. One- way repeated- measures ANOVA test is used to find out whether the variations at different stages is significant or not. The F value 502.91 shows that the variations in scores at different intervals of time is significant at 0.01 level.

In post hoc test, mean scores at different intervals were taken as two (pair) at a time. The mean differences in scores between initial-middle, initial-final and middle-final stages are 11.0, 17.5 and 6.5 respectively. The pair-wise comparison with Bonferroni correction shows that the mean differences are significant at 0.05 level. So it can be inferred that an increase in performance is seen from the initial stage to middle stage of

intervention, and from the middle stage to final stage and overall increase are significant and it is interpreted that ICT enabled intervention is effective in all aspects of LD.

**(ii) Effectiveness of ICT enabled package on overall aspects of LD in the subsample- Gender**

The scores on overall aspects of LD collected at different intervals were analysed for the subsample- gender and tabulated as shown below.

**Table 2 :Summary of one-way repeated - measures ANOVA and Post hoc Test with Bonferroni correction on overall aspects of LD for the subsamples-Boys / Girls**

Category	Stages	Mean	SD	N	F#	Pair	Mean Diff.	LS \$
Gender	Boys Initial	33.1	2.6	21	299.18**	D1 & D2	11.6	S*
	Middle	44.8	4.7	21		D1 & D3	18.5	S*
	Final	51.6	5.7	21		D2 & D3	6.9	S*
	Girls Initial	33.6	3.1	18	216.08**	D1 & D2	10.3	S*
	Middle	43.9	3.9	18		D1 & D3	16.3	S*
	Final	49.9	3.8	18		D2 & D3	6.0	S*

*D1- Initial Stage, D2- Middle Stage, D3- Final Stage* ,,\*\*: - Significant at 0.01 level ,\*: - Significant at 0.05 level, #One-Way Repeated Measures ANOVA (Greenhouse-Geisser corrected values),  $df=N-1$ , \$: Pair wise multiple comparison with Bonferroni correction

In the overall aspects of Learning Disability, the mean scores of subsample, boys at different intervals of time such as before implementation of MRTP, during and after the implementation of MRTP are 33.1, 44.8 and 51.6 respectively and that of girls are 33.6,43.9 and 49.9 respectively. The F values of boys (299.18) and girls (216.08) show that the variation in scores at different intervals of time are significant at 0.01 level.

In post hoc test, mean scores at different intervals were taken as two at a time. The mean differences in scores between initial - middle, initial- final and middle-final stages are 11.6, 18.5 and 6.9 respectively for boys and that of girls are 10.3, 16.3 and 6.0

respectively. The pair-wise comparison with Bonferroni correction shows that the mean differences are significant at 0.05 level. Thus it can be inferred that the increase in performance from the initial to middle stage, and from middle stage to final stage and overall increase are significant.

**(iii) Effectiveness of ICT enabled package on overall aspects of LD in the subsample- Scheme of study**

The scores on overall aspects of LD collected at different intervals were analysed for the subsample-scheme of study and tabulated as shown below.

**Table 3 :Summary of one-way repeated - measures ANOVA and Post hoc Test with Bonferroni correction on overall aspects of LD for the subsamples- State / CBSE schemes**

Category	Stages	Mean	SD	N	F#	Pair	Mean Diff.	LS \$	
Scheme of study	State Initial	35.0	2.3	19	300.09**	D1 & D2	12.0	S*	
	Middle	47.0	3.0	19					D1 & D3
	Final	53.4	4.1	19		D2 & D3	6.4	S*	
	CBSE Initial	31.8	2.4	20					221.78**
	Middle	41.9	3.9	20		D1 & D3	16.7	S*	
	Final	48.5	4.5	20					

*D1- Initial Stage, D2- Middle Stage, D3- Final Stage, \*\*: - Significant at 0.01 level \*: - Significant at 0.05 level, #One-Way Repeated Measures ANOVA (Greenhouse-Geisser corrected values) ,df=N-1, \$: Pair wise multiple comparison with Bonferroni correction*

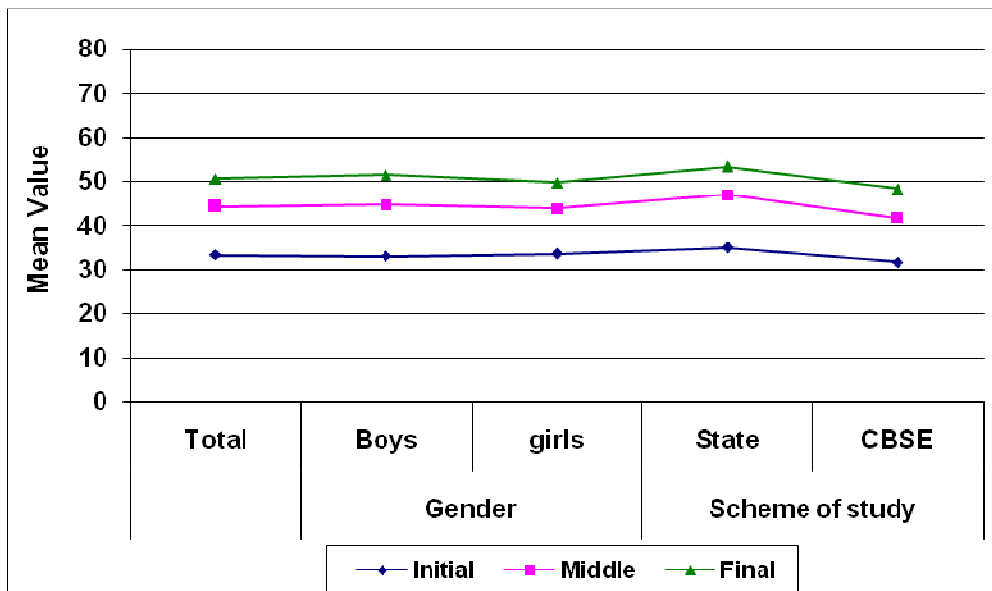
The mean scores of subsample, scheme of study – State LD at different intervals of time such as before implementation of MRTP, middle and after the implementation of

MRTP are 35.0, 47.0, and 53.4 respectively and that of CBSE scheme are 31.8, 41.9 and 48.5 respectively. The F value (300.09) of scheme of study - state scheme and CBSE scheme (221.78) shows that the increase in performance is significant at 0.01 level.

In post hoc test, the mean scores at different time intervals are taken two at a time. The mean difference between initial-middle, initial-final and middle-final stages for scheme of study- state scheme is 12.0, 18.4 and 6.4 respectively and that of CBSE scheme is 10.1, 16.7 and 6.6 respectively. The pair-wise comparison with Bonferroni correction shows that the mean difference is significant at 0.05 level. So it can be inferred that the increase in performance from the initial stage to middle of MRTP which is the learning style based intervention, increase in performance from middle to final stage of MRTP and overall increase are significant.

The consolidated results of analysis of one-way repeated - measures ANOVA (Greenhouse-Geisser corrected values) and Post hoc Test (pair-wise multiple comparison with Bonferroni correction) on all aspects of LD at different intervals of time of MRTP for total sample and subsample are shown in the below given table.

The graphical representation of the performance of PSS with SLD with respect to LD in overall aspects at different stage of implementation of MRTP for total and subsamples is given in the following figure.



**Figure 1 : Performance of PSS with SLD with respect to LD in overall aspects**

### **Findings**

Intervention is effective in significantly minimizing the Learning Disability among students with SLD with respect to the overall aspect of LD. There is significant difference in the degree of effectiveness among total sample of study group taught through intervention package.

- There is significant difference in the degree of effectiveness among boys / girls of study group taught through intervention package.
- There is significant difference in the degree of effectiveness among different scheme of study group taught through package.
- There is significant difference on the performance of students at initial, middle and final phases of implementation of the intervention package.

It empowered the students with Specific Learning Disabilities with necessary skills to overcome learning difficulties, which is possible if the instructions as well as the learning styles are clear to enhance the study skills. It helped the teachers to handle the students with learning difficulties. The intervention package tracked or channelized the regular school students with learning difficulties/ special educational needs. The multisensory approach used in the package created intrinsic motivation and this motivation level will stay high in the student, as he/ she have the learning preferences. It is very effective in enhancing performance in various aspects of LD among students.

### **Educational Implications**

The findings of the study showed that intervention is effective in minimizing LD difficulty in students with SLD. This finding has much importance in the individual learning of students with Special Educational Needs, and it will help to reduce the number of underachievers. This findings of the study implies that the multisensory approach is effective for learners irrespective of their individual abilities. The Intervention offers students enough freedom to choose activities and materials of varying forms and help in planning learning activities according to the needs and interest of students.

### Conclusion

To develop the interest in learning, for meaningful development in study habits and the better adaptation of self confidence in students, the usage of classroom intervention is essential. A single model of education programme for children with learning difficulties is not suitable for all children: any model that provides right intervention through right strategies with right material and technology in the right time and in the right place, makes the education of the children with learning difficulties as gainful as that of children had high scores. It will fulfill the 'zero rejection' policy so that no student is left out of the education system.

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*A STUDY OF ADJUSTMENT OF NINTH STANDARD STUDENTS OF  
AHMEDABAD CITY*

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**Introduction:**

Adjustment is a behavioral process by which a person maintains balance among various needs that one encounters at a given point of time. Each and every situation of life demands that the person concerned should be able to effectively perform in accordance with some guiding principles and should be able to strike a balance among various forces. Adjustment is defined as a process wherein one builds variations in the behavior to achieve harmony with oneself, others or the environment with an aim to maintain the state of equilibrium between the individual and the environment. Adjustment has been analyzed as an achievement as well as a process in psychology. Interpreting adjustment as an achievement would necessitate effective performance in doing what one was expected to and engaged in. This would mean judging the quality on certain parameters. However, psychologists have been interested to examine adjustment as a process. This entails examining the interaction of the individual with the external world. If the relationship between the individual and his/ her environment is in accordance with the norms then the adjustment is achieved..Education helps human being to adjust them in Society. Knowledge is acquired through education that motives for wise action.

**Importance of the study:**

From the time child enters the school he is a midst the range of the factors, facilities and amenities. The infrastructure, instructional facilities and the human resources surround



the child and here by the child needs to justify himself with these. The justification leads child to adjust himself in the educational institutions.

The ninth standard students face many difficulties in their path. Some students leave their studies in between only. Some students are unable to adjust with other students. Some are not satisfied with the education given by the teachers of their institute. Some of the students face problems and difficulties because of lack of facilities. Some cannot setup their timings. Economical condition of many students is not proper and good. Their parents are unable to afford more for their studies. So such types of students have to manage for themselves or they leave their studies in ninth standard only. At times environment of the school also becomes problem for the students. All there are many more problems of the ninth standard students.

They are unable to cope up with their surrounding which lead them towards maladjustment. Some of the students struggle in their life for completing their further studies while some of the students leave their studies in the ninth standard only.

### **Adjustment**

Adjustment will be defined as a process of altering the behaviors to reach the harmonious relationship with the environment. When people say they are in adjustment they typically mean they are going through process of chain and checking for some level of balance with environment other or themselves.

Adjustment means-

1. The act or process of adjusting
2. The state of being adjusted

Adjustment means the modification, adaptation to harmonize the students, teachers and environment.

In the present research adjustment means the adaptation and modification of the behavior of the ninth standard students to develop harmony with environment.

### **Variables of the study:**

In the present study the variable such as Gender is independent variables where as adjustment (Educational, Social, and Emotional) will be dependent variable.

**Hypotheses of the study:**

- H01 There will be no significant difference between mean adjustment score of boys and girls of ninth standard students of Ahmedabad.
- H02 There will be no significant difference between mean educational adjustment score of boys and girls of ninth standard students of Ahmedabad.
- H03 There will be no significant difference between mean social adjustment score of boys and girls of ninth standard students of Ahmedabad.
- H04 There will be no significant difference between mean emotional adjustment score of boys and girls of ninth standard students of Ahmedabad.

**Limitation of the study:**

This study is limited to the ninth standard students of Ahmedabad city only.

This study is limited to students of Gujarati medium studying in GSEB schools only.

**Tool of the research:**

For the present study adjustment tool was prepared by researcher herself and given to the experts' related to educational field. There were considered three types of adjustments in present research. This tool being given to the experts for verification. At initial level there are 40 items in each type of adjustment statements'. Total 120 statements were given to experts. According to expert suggestions 19 statements were removed. Finally there were 32 statements in educational adjustment, 34 statements were in social and 35 statements (total 101 statements) were in emotional adjustment measuring adjustment of nine standard students of Ahmedabad city.

**Method and planning of the research:**

In the present study non probability sampling will be used to select 300 (160 boys and 140 girls) students as the sample subjects from four schools of Ahmedabad city area. The method of the present study was the descriptive method of which survey method is used for this research. After selecting appropriate tool methodology and the sample and seeking the permission from the school the researcher decided date and time and administered the test as required and as per the instruction. Similarly the test was

administered in the other schools on all the samples and thus the data from the 300 numbers of students were collected.

After the data collection researcher conducted the scoring of the tools and one score was given to each true statement (whether the statements were considered as yes / no answers) as per the key. The statistical techniques as such the Mean, Standard, Deviation and T Test were used for the analysis and hence the interpretation.

**Analysis and interpretation of data:**

Data were calculated according to hypothesis with the use of SPSS – 21 version programme for social sciences. The results are given in tabulation as under. Higher mean scores are shown higher adjustment of the students in respective types.

***Hypotheses: 1***

***There will be no significant difference between mean adjustment score of boys and girls of ninth standard students of Ahmedabad.***

**Table: 1**  
*Significant difference between mean adjustment score of boys and girls of ninth standard students*

Adjustment (Total)	Numbers	Mean	Standard Deviation	t value	t table	Significance
Boys	160	61.55	16.77	6.44	1.96(0.05) 2.58(0.01)	Significant
Girls	140	72.88	13.67			
TOTAL	300					
	M1-M2	11.33	DF= 298 Ho1 is rejected at 0.01 level			
	t value	6.44				

As mentioned in the table -1 t calculated is 6.44 .The table values at 0.05 and 0.01 level are 1.96 and 2.58 approximately. Here, calculated value is higher than table values. Hypothesis: 1 is rejected. There is seen significant difference between mean adjustment score of boys and girls of ninth standard students of Ahmedabad city. Mean score of adjustment of girls (72.88) is higher than boys (61.55).Girls of Ahmedabad city is more capable in adjustment than boys .

**Table: 2**

*Significant difference between mean adjustment (educational) score of boys and girls of ninth standard students*

Adjustment (Educational)	Numbers	Mean	Standard Deviation	t value	t table	Significance
Boys	160	20.66	5.11	4.03	1.96(0.05) 2.58(0.01)	Significant
Girls	140	23.1	5.33			
TOTAL	300					
	M1-M2	2.44	DF= 298 Ho2 is rejected at 0.01 level			
	t value	4.03				

As mentioned in the table -2 t calculated is 4.03 .The table values at 0.05 and 0.01 level are 1.96 and 2.58 approximately. Here, calculated value is higher than table values. Hypothesis: 2 is rejected. There is seen significant difference between mean adjustment (educational) score of boys and girls of ninth standard students of Ahmedabad city. Mean score of adjustment (educational) of girls (23.10) is higher than boys (20.66).Girls of Ahmedabad city is more capable than boys in educational adjustment.

**Table: 3**

*Significant difference between mean adjustment (social) score of boys and girls of ninth standard students*

Adjustment (Social)	Numbers	Mean	Standard Deviation	t value	t table	Significance
Boys	160	19.33	5.88	7.62	1.96(0.05) 2.58(0.01)	Significant
Girls	140	24.11	4.99			
TOTAL	300					
	M1-M2	4.78	DF= 298 Ho3 is rejected at 0.01 level			
	t value	7.62				

As mentioned in the table -3 t calculated is 7.62 .The table values at 0.05 and 0.01 level are 1.96 and 2.58 approximately. Here, calculated value is higher than table values. Hypothesis: 3 is rejected. There is seen significant difference between mean adjustment (social) score of boys and girls of ninth standard students of Ahmedabad city. Mean score of adjustment (social) of girls (24.11) is higher than boys (19.33).Girls of Ahmedabad city is more capable than boys in social adjustment.

**Table: 4**

*Significant difference between mean adjustment (emotional) score of boys and girls of ninth standard students*

Adjustment (Emotional)	Numbers	Mean	Standard Deviation	t value	t table	Significance
Boys	160	20.11	5.34	9.37	1.96(0.05) 2.58(0.01)	Significant
Girls	140	25.89	5.32			
TOTAL	300					
	M1-M2	5.78	DF= 298 Ho4 is rejected at 0.01 level			
	t value	9.37				

As mentioned in the table -4 t calculated is 9.37 .The table values at 0.05 and 0.01 level are 1.96 and 2.58 approximately. Here, calculated value is higher than table values. Hypothesis: 4 is rejected. There is seen significant difference between mean adjustment (emotional) score of boys and girls of ninth standard students of Ahmedabad city. Mean score of adjustment (emotional) of girls (25.89) is higher than boys (20.11).Girls of Ahmedabad city is more than boys than boys in emotional adjustment.

**Conclusion:**

It will be followed by the consultant depicting the relationship of the adjustment in relation to the variable like gender. There is seen significant relation between ninth standard boys and girls of Ahmedabad city in adjustment. Girls are more capable in adjustment than boys. Educational, social and emotional adjustments of girls are higher than girls. It is cleared from research that the teachers and parents should try to improve adjustment through teaching and counseling.

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***IMPACT OF SOCIAL MEDIA IN THE CLASSROOM***

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**INTRODUCTION**

Educating our children using and on Social Media is vital to their success. The goal of education is to prepare students for the world outside of school. In today's world, social media is vital to any business and therefore must be studied. The potential of social media is limitless along with the creativity of our children, we need to give them the tools to expand their creativity and prepare them for entry into "the real world."

Social Media is about collaboration and sharing. For both students and educators it's an opportunity to communicate outside the four walls of a classroom or school building.

Social media brings the world to the classroom and enables students to communicate across the world. Social media breaks down time, distance and accessibility barriers and brings many opportunities for learning to happen anywhere, anytime. It fosters two-way communication and collaboration, which is really the essence of any learning experience. With social media, any one person now has a valuable voice to add to the conversation.

Social media can be integrated in education to allow students get ideas and exchange knowledge with other people by support of internet. Internet is cheap but essential part of live which can be used for different purposes such as reading emails, shopping, socializing, and advertising among others. Many students have access on internet though their phones and personal computers thus they can easily access social media. Use of social media in education is believed to have its own benefits and risks. First, social media can be of great importance as it can be used as an educational tool. Students can use web and social sites to research and learn new terminologies that can assist them to expand their learning experience. Students can easily click on the items they want to learn or research about, engage materials and the end they will learn a lot. Social media

can be applied in education to support student with new learning ways and practices. Students can get latest information on outside world as fast as they are happening and thereby they are able to keep themselves updated on the current issues. Social media provides relevant and reliable information, which students can use to research more on their assignments and projects. Student can be able to get more online tutorial classes to the topics that they did not understand in class hence acquitting them with more learning knowledge.

Social media is often seen merely as a way to pass the time or stay connected to friends and family. However, its use is rapidly expanding into the educational sector.

The first step towards applying social media into education starts with empowering teachers by giving them freedom to use social media to engage with students and giving them the freedom to come-up with innovative ways of teaching using technology.

### **IMPACT OF SOCIAL MEDIA IN THE CLASSROOM**

As an educational tool, social media enriches the learning experience by allowing students and teachers to connect and interact in new, exciting ways. Web sites such as Facebook, Twitter, and LinkedIn provide a platform where users can dialog, exchange ideas, and find answers to questions. These sites are designed to foster collaboration and discussion. Schools are beginning to take a different approach by introducing social media into the educational system itself. Here are some pros and cons of social media in the classroom and how it is being used for educational purposes.

#### **Positive Impact of Social Media in the Classroom**

##### ***Educational Tool***

Today's students arrive on campus, fluent in Web and social networking technologies. Educators can leverage this knowledge to enrich the learning experience. With social media, instructors can foster collaboration and discussion, create meaningful dialogue, exchange ideas, and boost student interaction.

##### ***Social media as a tool to develop students' voices***



One of the major benefits of using social media with students is teaching them to communicate openly, honestly, and, above all, kindly with their peers. The perceived privacy or anonymity of being online is especially freeing for boys, who may otherwise feel it is uncool to engage in class discussions or to show their emotions. Therefore, it is imperative to use this teachable moment to promote compassionate communication.

### ***Social media sites can increase student collaboration***

Social media sites provide an avenue for students to easily contact one another regarding school projects, group assignments or for help on homework assignments.

### ***Enhance student engagement***

Social media is an effective way to increase student engagement and build better communication skills. Students who rarely raise a hand in class may feel more comfortable expressing themselves on Facebook, Twitter, or YouTube. Social networking platforms enable teachers to establish “back channels” that foster discussion and surface ideas that students are too shy or intimidated to voice out loud.

### ***Improve communication among students and teachers***

Facebook and Twitter can enhance communication among students and teachers. Educators can answer students’ questions via a Facebook page or Twitter feed, post homework assignments and lesson plans, send messages and updates, schedule or announce upcoming events, and share interesting Web sites and multimedia content. Students can use Twitter to get help from instructors or other students. A great way for instructors to give participation points in addition to in class participation is by having students tweet about something that was discussed in class.

### ***Share resources quickly when using social media in the classroom***

If the teacher needs to direct students to a particular online resource they can easily share the site through social media sites like twitter. If the teacher wants the class to visit a particular site all they have to do is tweet the website and the entire class can view it with one click.

***Social media helps keep parents, teachers and students all on the same page***

It is very useful for teachers to be able to post on social media sites about class activities, homework assignments and even school events. This helps the teachers, parents and students all stay on the same page about what is going on at school. Sites like facebook also allow teachers to easily communicate through private messages to parents and students without having to leave phone messages and wait for a call back.

***Preparing students for successful employment***

Students entering the workforce can use social networking sites to network and find employment. With LinkedIn, students can establish a professional web presence, post a resume, research a target company or school, and connect with other job seekers and employers. College career centers and alumni associations are using Twitter to broadcast job openings and internships. Students should follow businesses or professional organizations on Facebook and Twitter to stay updated on new opportunities and important developments in their field.

**Negative Impact of Social Media in the Classroom**

***Social media can be a distraction***

A common complaint among educators is that social media is distracting in the classroom. These instructors maintain that tools like Facebook and Twitter divert students' attention away from what's happening in class and are ultimately disruptive to the learning process. With the possibility that the use of social media tools can be an invitation for students to goof off, instructors should make sure they won't be abused.

***Improper use of social media in the classroom***

Students might take advantage of being able to access social media in the classroom and use it for personal interactions instead of for school related activities. If students are not closely monitored it will be hard to know how if they are using social media properly during class time.

***Cyber bullying on social media websites***

While social networking sites provide a way for students and teachers to connect, they can be a weapon of malicious behavior--even on college campuses. In a study about cyberbullying at Indiana State University, researchers Christine Macdonald and Bridget Roberts-Pittman found that almost 22 percent of college students admit to being harassed online. Of this group, 25 percent report they were bullied through a social networking site. Instructors who use social media as part of their course activities should be aware of potential dangers and plan to intervene on minor incidents before they become more serious. "By intervening at minor behaviors, we can stop more severe negative behaviors," said Macdonald. "We must insist on civil and respectful behavior."

***Posting inappropriate content on social media websites***

One of the reasons social media sites are not allowed in schools is because it is difficult to monitor how students use social media sites. A student may post inappropriate content such as pornography or foul language which would be both distracting and damaging to students.

***Using social media in the classroom can detract from human interaction***

If students are encouraged to participate in class discussions through social media websites this could impact their ability to interact in face to face situations. Students still need to learn how to have conversations with people even in this modern technology based world.

***Discouraging Face-to-Face Communication***

Some educators are concerned that while real-time digital stream may create a safe harbor for students who are uncomfortable expressing themselves, students are missing valuable lessons in real-life social skills. Students may find themselves at a disadvantage during college admission or job interviews when they need to command attention and deliver a coherent message. At social gatherings and in personal relationships, they need to be able to effectively express themselves and connect with others.

## **CONCLUSION**

Ultimately, while the debate continues over what role social media should play in the classroom, no one can argue the influence that social networking has on today's students. This tech-savvy generation conducts much of their life through social media channels. Not surprisingly, they're already using YouTube, Facebook, and Twitter as tools for learning and collaboration. They expect that their campuses will follow suit. With this in mind, it seems prudent for today's institutions to get on the social media train and find ways to successfully integrate these tools into the classroom.

There are many pros and cons of using social media in the classroom, so now the question is should schools allow social media in schools? There are some websites that address the negative issues of social media but still allow social media to be used for educational purposes.

There are many sites that allow teachers to communicate with students, post assignments on a secure site that can only be accessed by their class, and facilitates class discussions. It is set up with filters to prevent students from posting profanity or pornography. This is a solution that allows schools to embrace the positive aspects social media has to offer education and at the same time helps prevent the negative aspects from being an issue.

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***ECONOMIC ANALYSIS ON DETERMINANTS OF CHOICE OF HIGHER  
EDUCATION IN TAMIL NADU***

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**Introduction**

In India, higher education is the lintel of the entire educational edifice of a country. This sector has grown much faster than all other sectors of education and is poised for a bigger leap with success in university education system. Secondary Education covers almost 15 years pre-primary to senior secondary stages-three years of pre-primary followed by 12 year of schooling. The 12 years of school education has been divided into four stages – primary, upper primary, secondary and higher secondary stages, comprising of five, three, two and two years of education respectively. Although India adopted common pattern of higher education system, internal structure of syllabus and courses varies to universities and institutes. India has one of the largest university systems in the world which has expanded in a big way after independence when there were only 20 universities, 1.7 lakh students and less than 600 colleges. In 2013 the number of students enrolled rose up to 17 million in 687 universities. Most tellingly, percentage of students enrolled in higher education is only 10 per cent whereas developed countries are aiming at 50 per cent enrollment.

**Higher Education in Tamil Nadu**

The number of students enrolled in Arts and Sciences colleges over the years 2007-2012 has been on the increase in the all type of colleges. The positive trend in collegiate education is the enrolment of number of girl students in the last 3 years in the arts and science colleges in the state. The enrolment of students increased 3,64,222 in 2007-08 it has been increased to 4,05,435 in 2010-11 in arts and science and education colleges. Towards promoting technical education in the state six government

engineering colleges, three governments aided engineering colleges, 16 constituent colleges of Anna University and 431 self financing engineering colleges are functioning. Engineering education has become popular among the students passing out of higher secondary education with marks above 70 per cent. Even first generation students are aiming for engineering courses. The three year analysis of enrolment is an indicator of the trend for an engineering degree among students in Tamil Nadu 95,808 students are enrolled in 2007-08 it has been increased 1,62,231 in 2010-11.

### **Scope of the Study**

The present study attempts to examine the factors influence of choice of higher education among to the students after completion of their higher secondary education in Tamil Nadu. This work examines how far the students aware to knowledge of higher education in Kancheepuram and Tuticorin district. The study would provide a framework for drawing suitable guidelines for improving to higher education in Tamil Nadu.

### **Objectives of the Study**

1. To examine the measurement and economics of higher education in Tamil Nadu.
2. To study the factors influence to choice higher education institutions among the students in Tamil Nadu.

### **Methodology**

Tamil Nadu state was selected on the research area which is geographically divided into two regions, namely south and north Tamil Nadu. This study focused on south region ten colleges comprising of five from rural and five from urban area were selected randomly from Tuticorin district and this same method followed on north region ten colleges in Kancheepuram district. The selected colleges from each district were again classified in to three categories – namely Government, Aided and Unaided colleges. In total 20 colleges were chosen as sample of the study, comprising of 10 rural colleges and 10 from urban colleges in the selected regions.

The primary information was collected on the basis of structured questionnaire from the selected college students by the interview method. Data has been collected from

100 students, in these respondents 50 were male and 50 were female students. Data included cost with its constituents-fixed and variable and course fee, family income, higher secondary school expenses, parental educational qualifications and factors influence to choosing the colleges.

In collected information was tabulated and analysed with help of simple statistical tools such as averages and percentages. Secondary data collected from Government records and reports.

### **Measurement of Education**

An ideal measure of an individual's education should capture several components, including the number of years spent in school, the quality of the schooling, the nature of the curriculum, and the student's effort. Creating a measure that accurately quantifies these components is difficult. Of these components, and individual's years of schooling is the only directly observable characteristic. We may indirectly measure aspects such as educational quality and individual ability and effort through standardized tests; however, there is disagreement regarding the reliability of such tests.<sup>1</sup>

In microeconomic analysis that studies the variation in wages as a function of education, individuals' year of schooling is frequently used as an independent variable. This method has advantages in that such data are readily available in developed countries, but it does not account for differences in the quality or type of education received. Alternatively, individuals may be classified by highest degree completed. This measure also has problems, for example, and individual nearly finished with college is counted as a high school.

In macro economic analysis, economists often include a variable for human capital because human capital encompasses a range of characteristics such as education work experience, and health, it is extremely difficult to directly measure human capital. Any measure of a country's aggregate human capital must have the characteristics are it must be comparable across countries, it must address the broad range of criteria that

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<sup>1</sup> The existence of an industry focused on standardized test preparation, racial disparities in test scores, and concerns over test-retest reliability have led to criticism of the use of standardized tests in recent years. For further information, see: Gordon, Edmund. (1995) 'Toward and Equitable System of Educational Assessment' *Journal of Negro Education*, Vol. 64, No. 03. Pp. 360-372.

comprise human capital and it must include elements of human capital for which data are available or estimable.

### **Choice of Higher Education, Efficiency and Quality**

In the case of reforms of higher education, there can be one different type of policy intervention which seeks to simulate market like competition by fostering choice making of an educational qualification by parents. Advocates of a market will argue that creating a market-like situation in education to foster competition is an effective way to produces which are often not measurable. Each institution is unique and has been created to serve a purpose which is well-articulated in its mission. The raking will, therefore, inevitably involve identifying commonalities and focusing on basic purposes such as teaching and research. Research output can somehow be quantified in terms of publications and quality can also be assessed in terms of the 'citation index' and impact factor, but the problem lies with social sciences and humanities. In the presence of different paradigms in social sciences, it is difficult to measure research quality and compare it across borders. The dominance of English language tilts the balance in favour of English speaking countries and after all English is the language of research. Assessing the quality of teaching has been difficult though it is a major task of a university. Teaching and research cannot be seen separately as they feed each other. The quality of a university depends on the quality of its students and faculty. It has been observed in the Indian universities in order to rank higher in the ladder compromised with their student selection policies and preferred merit-based aid rather than need-based aid. One genuine way for a university will be to identify the gaps and flaws in its performance and take steps to improve it without much of compromise with its mission.

### **Economics of Higher Education**

Access to higher education needs to be widened in the country, in the formal system through effective innovative measures, such as a truly open system and networking of Universities. It is now imperative on the part of Indian Universities to generate their own resources to a large extent. This could be done through several methods, like raising tuition fee and collecting capitation fee ( both having severe



limitations) and others like, launching courses for foreign students, obtaining donations from philanthropists, etc., which have a good potential.

In the globalized World, the State-protected educational system cannot withstand the pressure without making itself competitive. There seem to be four reasons to new policy initiatives should be taken by the Government in this connection. They are: (i) the economic returns of primary education far exceed the returns of higher education; (ii) the private returns on higher education far exceed the social returns; (iii) that the State funding for higher education is insufficient in countries like India; and (iv) since private sector benefits the most from higher education, it is only just that it should make a decisive contribution.

Whether one accepts the Government's rationale or not, new strategies need to be developed for the survival and well being of the higher education system in the present scenario. Taking the problem of resource crunch in higher education at face value, some alternative ways were considered at the present situation, such as: research grants from industries, donations for admissions etc. which were found to be inadequate. It was observed that an organized structure for higher-educational fund raising and creating a culture of giving are the only possible solutions.

### **Choice of Higher Education**

Education which was a "Freed Good" then now becomes a commodity which tags with different price at different market condition. Hence there is a possibility to apply all the theories of economics related to a market can be tested with respect to this commodity of education. The supply and demand for various stages of education. The purchasing power of different segment of the population and the role of governments in terms of capital investment of creating social infrastructure and providing subsidies to education. The public – private share in the educational sector and its impact on economic growth can be reviewed. Even though the literacy rate of India has gone up significantly, the percentage of students goes for higher education is only around 12 per cent which is not a good sign. Choice of higher education related to parental income, marks of the students and students various perception to the higher education.

**Table – 1: Choice of Higher Education in Tamil Nadu**

Sl. No.	Statements	Kancheepuram District				Tuticorin District				Total
		Male		Female		Male		Female		
		Y	N	Y	N	Y	N	Y	N	
1	The college had a very good reputation	20	05	22	03	12	13	08	17	100
2	The course I have chosen has a good reputation	25	-	25	-	21	04	16	09	100
3	The fees were low in the institution	12	13	09	16	22	03	21	04	100
4	The college bus service is available in our area	21	04	24	01	08	17	19	06	100
5	The institution provide quality of education	22	03	18	07	10	15	06	19	100
6	The institution has a very good library	17	08	12	13	19	06	14	11	100
7	A large number alumni had acquired jobs in their respected fields	18	07	14	11	13	12	17	08	100
8	There are possibility to apply for education loan in the institution	24	01	25	-	18	07	16	09	100

**Source:** Primary Data, 2014. **Observation:** Y – Yes; N – No.

The table – 1 analyse to the choice of higher education in Tamil Nadu. This study compare to two districts in Tamil Nadu. Nearly 42 per cent of the respondents focused college had a good reputation in Kancheepuram district and 20 per cent students are agreed to the focused good reputation in college of Tuticorin district. This attitude reveals that Tuticorin district is having less ranking institution. In this area most of institution situated in rural area and enrollment of students from rural sector.

All the respondents are agree with their academic course are good reputation for academic excellence in Kancheepuram district and 37 per cent of the students are agree same statements in Tuticorin district. Students are aware to their academic courses in Tamil Nadu. But women students take decision with their parents for joining in their academic courses.

In the context of course fees about institution nearby 21 per cent of students are feel to fees were very low in their institution of Kancheepuram district and 43 per cent of the Tuticorin district students are agree to their course fees is very low. Because of Tuticorin district has a many government and government aided institutions.

College bus services are one of the main facilities to educational institutions. 45 per cent of the students agree to college provide bus service to their location in Kancheepuram district and 27 per cent of the respondents are avail bus service to their residence. College bus service is main factor of increase to the girls' enrollment in higher educational institutions. All the colleges should be ensured transport facility to the student community.

Almost 40 per cent of the respondents ensure their institution provide to quality of education in Kancheepuram district and 16 per cent of the students are agree to this same statements in Tuticorin district. Because of quality of education is an important factor to higher educational institutions. Government of Tamil Nadu should be taken a measure to increase quality of education in Tuticorin district.

Library is a back bone of educational institutions. 29 per cent of the students are agree to colleges provide very good library of their institutions in Kancheepuram district and 33 per cent of the students are ensured to their institutions had a very good library in Tuticorin district. This research reveals that many students are regularly use their college libraries in Tuticorin district.

Nearly 32 per cent of the students are consider to alumni had acquired jobs in their respected fields in Kancheepuram district and 30 per cent of the respondents are agree with same statements in Tuticorin district.

Education Loan is a gift to poor students. In recent survey of Reserve Bank of India stated that Tamil Nadu ranked to first in getting education loan compare other states. All the higher education students are eligible to education loan scheme. But 49 per cent of the students are aware to the education loan in Kancheepuram district and 34 per cent of the students are known about the education loan in Tuticorin district.

### **Conclusion**

The conclusion provides educational institutions with an indication of the importance of choice factors considered by students in selecting an institution. This will enable those institutions to use their limited funds more efficiently to attract the merit recruitment policies, to create a unique position, to segment the student market more appropriately and to gain a competitive advantage. Information obtained from this research also contributes to the available body of knowledge on this topic and could be used by other researchers as a basis for future research.

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*A COMPARATIVE STUDY ON ASIAN UNIVERSITIES ON GLOBAL RANKING  
TO TRACE THE CHALLENGES FOR INDIAN UNIVESITIES.*

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**Introduction**

Atthis juncture, the global players in the field of Education have begun to realize that the quality of education is deteriorating to the extent of affecting the global and national development and progress. This consciousness has urged the government and private institutions to examine their present educational setup and find new means and ways to upgrade and transform the existing educational strategy .Ambani in his report states, “ Education is becoming even more vital in the new world of knowledge , knowledge has become the new Asset. Future Growth of the world is expected to come from knowledge led business.” In this regard, the media has repeatedly exposed the status of education in ones country and even the short fall of standards in global educational efforts.

On the other hand, the explosive and enormous advancement in Science and Technology has tremendously helped most countries in the world to Progress. Almost all countries have harnessed the benefit of adapting to latest technologies in various fields to elevate the life of People to some extent. Most countries are not very much keen on investing in education except a few western countries. This has been felt recently in many countries. Education has the greatest potentials in transforming countries advancement. Thus it is the right and appropriate moment to scrutinize and analyze the short comings and explore the innovative new avenues and opportunities present within its scope.

Obviously the accessibility and the efficiency of technology is undeniable fact and harnessing them adequately to the educational practices can reap a rich harvest in both business and social transformation of any society. Therefore a modern educational methodology is a must and demands drastic revamp and change in the present system. As A.P.J. Abdul Kalam puts it, “Teachers should have the capacity to nurture the Creative

minds and imagining minds”. To do so information and communication technology (ICT) must be integrated in Educational practices. Some may fear that this can create digital divide but this can be averted by disseminating the technology to the grass roots.

### **The Legacy:**

Our colonial past is linked to the British who played a great role in administration and development. The overall transformation of the country is credited to the good works and the humanitarian services rendered by them. The undeniable fact is that a good foundation has been established in field of Education in this country by their ardent effort. Both the British rulers and the missionaries have put their heart and soul to bring about an Educated India. Many of our great leaders are the product of such excellent and exemplary educational institutions. This does not mean that there was no education in India prior to British invasion. India had its own tradition of Educational system well marked by the term GURUKUL. Similar to the British, the Indian system of learning was founded on the principles of relationship between Guru and Shisia. Our great tradition in higher Education is revealed to the whole Asia in and through the prestigious and well known Nalanda University of the ancient past.

### **Objectives:**

This study is to find out why our Universities are unable to compete with that level of other universities in the international market. It aims to have a close look at the criteria with which the global ranking agencies are measuring. It examines the status and performance of our Universities with in the Asian context too. Although our institutions and government have worked tremendously for the expansion of higher education we have failed in quality wise. It specially investigates the Priorities that we have failed to do by comparing all top five universities of various Asian countries on vital measures. It also examines the research and publication data of Indian universities so that how far our institutions are in line with the international demand at present.

### **Methodology**

This paper attempts to investigate using the secondary data available from the international provider and some data from Indian Publications. The data collected is huge and is not viable to encompass with in this limited presentation, therefore it uses the part of the data by using convenient sampling method. This paper has selected only five top universities from selected Asian countries for comparative analysis. It presents the collected data in tabular form for easy understanding of the measures. It also examines the criteria that are used by Indian Authors in Indian context. It also provides space for further study in enhancing quality of higher education for future expansion and development. It provides interpretation of the data in a more vivid manner to assist the policy makers.

### **Presentation of Models of Ranking**

Any investigation demands a specific criteria or measuring tool that is realistic. In this regard many people have varied opinions but the sole purpose of this paper is to raise the quality level of our institutions. This requires a common measuring tool that is globally acceptable. Most common one is QS world ranking criteria. They have provided six criteria. They are as follows: 1.Academic reputation 40%, 2.Employer reputation10%, 3.Faculty student ratio20%,4.Citation per Faculty20%,5,International student and staff ratio5%. Shanghai Jiao Tong University applies world ranking under different standards like Alumni winning Nobel Prize 10%, field medal20%, Research cited 20%, Natural sciences20%, social science citation20% Size of the Institution10% The Taiwan Bibliometric based Ranking assess eleven years publication, eleven years citation using H-Index and P-Index on 6 different fields. European ranking uses three criteria like number of publication cited, Impact Factor and Impact Factor of Scientific Publications. Top five Asian Universities are compared and also top five Indian Universities are selected and presented under world ranking criteria below

### **Findings and Discussions**

First the selected data is presented in a table form under three important criteria because some of the Asian countries have not provided their data in some area such as internationalization so we can not use them for our study because that will make our conclusions one sided and wrong.

**Table1 QS world ranking of top Asian Universities**

University	Overall Score		Academic Reputation		Citations per faculty	
	Rank	Score	Rank	Score	Rank	score
<b>INDIA</b>						
University of Delhi	441	28.8	214	51.4	126	69.3
Indian Institute of Technology Bombay (IITB)	233	47.1	183	58	294	43.0
Indian Institute of Technology Madras (IITM)	313	39.2	306	40.3	266	46.6
Indian Institute of Technology Kharagpur (IITKGP)	346	37.1	352	36.0	205	57.0
Indian Institute of Technology Delhi (IITD)	222	49.4	215	51.4	157	63.3
<b>SINGAPORE</b>						
National University of Singapore (NUS)	24	89.4	9	100	204	57.3
Nanyang Technological University (NTU)	41	81.1	60	92.4	368	33.0
<b>CHINA</b>						
Tsinghua University	48	79.9	29	99.3	323	38.3
Shanghai Jiao Tong University	123	63.6	87	83.6	218	54.9
Peking University	46	80.0	19	99.8	267	46.5
Fudan University	88	70.0	59	92.5	142	64.9
Zhejiang University	165	57.2	128	72.6	147	64.5
<b>Hong Kong</b>						
University of Hong Kong	26	88.6	28	99.4	239	51.7
The Chinese University of Hong Kong	39	82.3	50	94.5	265	47.1
The Hong Kong University of Science and Technology	34	84.4	55	93.3	233	52.6
The Hong Kong Polytechnic University	161	57.7	171	60.9	303	41.2
City University of Hong Kong	104	67.7	147	67.0	257	47.9
<b>Japan</b>						
The University of Tokyo	32	85.7	7	100	99	76.3
Kyoto University	35	84.1	17	99.9	124	68.4
Osaka University	55	76.9	64	91.7	197	57.7



The above data reveals that National University of Singapore has scored the highest among Asian Universities. It amounts 24<sup>th</sup> rank and the score it has got is 89.9 out of 100 in the Academic reputation following that the University of Hong Kong has got the score of 88.6 out of 100 and therefore it is ranked as 26 in Asia. Then the University of Tokyo is ranked as 32<sup>nd</sup> having the score of 85.7 out of 100. In this criteria if we look at the Indian university status it is heart breaking. The top most University in India is ranked after 200 that is the Indian Institute of Technology, Delhi and the Delhi University occupies the 414<sup>th</sup> rank.

Applying the Employer reputation criteria, the National University of Singapore and University of Tokyo got 100 percent score and thus ranked as 6 and 7 places respectively. Even in the second criteria the Indian university did not fare well. They could reach only 50 marks in scoring. As for as the third criteria which focuses on research and publication, the university of Tokyo has got 76.3 as score and placed at 99<sup>th</sup> rank in citation of papers per faculty. In this area too our institutions did not perform well. Among the Indian Universities Delhi University has got the score of 69.8 and ranked as 126<sup>th</sup> position in the Citation of publications. It is clear from the data that we have not performed well compared to Asian Universities then how can we long for the top level in International arena.

**Table 2. Data on Publication and citation of Indian Universities**

<b>S.No</b>	<b>INDIAN UNIVERSITIES</b>	<b>TOTAL NUMBER OF PUBLICATIONS</b>	<b>CITATION PER PAPER</b>	<b>H-INDEX</b>
1	Banaras Hindu University	4870	14.74	42
2	Jadavpur University	4807	22.62	43
3	University of Delhi	4784	18.74	45
4	Anna University	3687	18.74	35
5	Madras University	3060	19.74	34

The above table implies that our institutions are in full swing in the area of publication but not in par with the Asian and International level. Yet there is no doubt that we have realized the importance of research and publications. Our institutions are putting their full effort and some of them are excelling in research and publications. In the global level we are poor and even in par with Asian institutions. The citation indicates that our papers are not up to the international level and low. The data show the universities of the North perform better in Publications.

**Reform Needed:**

The key problems identified are lack of Vision and focus and the controlled uniform system of higher education hinders autonomy. The retaining faculty and development strategy lacks number of things such as ICT implementation, lack of developing research culture, lack of merger and collaborative working culture, lack of infrastructure. The more clerical and procedural based operation, overload of media and technology environment and lack of transparency and accountability remains a block . As long as we do not tackle these problems how can we rank Indian Universities globally? A three tier system of faculty development can enhance research and publication efforts that can lead to become par with global Universities.

III	Faculty 10years >	Initiating innovative research Funded Projects Guiding Research and Publication	¼ th Teaching Load
II	Faculty 5 to 10	Learning research culture and Publication experience	Half Teaching Load
I	Faculty 0 to 5	Developing Teaching experience	Full Teaching Load

**Conclusion**

The study implies that the higher education institutions should no more follow the age old pattern of class-room teaching instead transform the style of educational method. It demands that our education system must change drastically placing the right priority. Academic excellence must be our priority and to peruse such goal our institutions must

focus to research and publications in higher level. Develop our students away from bookish way of learning to independent and blended learning based on creativity, innovation and research. This ambitious task must be strengthened by our Government and Private partners in policy making and implementations.

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*FACTORS AFFECTING SPOKEN ENGLISH IN GUJARAT*

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**Introduction**

India is a multilingual country. There are many languages spoken in India, though English has never lost its place in the list of languages. We talk of nationalism and promotion of Hindi but there is an argument about Hindi as national language between the northern and southern states of India. Still it has not attained the position of national language of India. On the other hand- Globalization is pushing us towards English and Gujarat, being a state known for its business class people, who move from one place to another can't merely stick to their local language, they need to equip themselves with a lot of languages which include English too. Most of the Gujaratis are seen flying abroad for their higher education and job- and English plays a major role to make them comfortable there. Even after all these reasons, Gujarat is considered to be weak in English. Let's look at the three major factors affecting spoken English in Gujarat.

**Factors affecting spoken English in Gujarat**

**A) Lack of Purpose:**

Learning should be purposive. It is very easy to understand the purpose of subjects like Mathematics, Science and Social Science, but when it comes to English, the teacher herself is confused about the purpose of English language teaching. English periods are treated as a story telling time. The funniest part is that they tell the story in the local language so that the students understand the story and are able to answer the question asked in the exam. The answers are given to students and they are just expected to learn it

by heart (just memorize it). There is hardly any experimentation from students end about the language. So more often English is taught as a subject than a language. Have you ever wondered that though English is offered as one of the subjects in school curriculum still students after their graduation have to go to spoken English classes to improve their English so that they could go abroad? It is indeed funny for almost 12 years they are studying this language and have not attained excellence but by doing a crash course they become considerably fluent in English. This remarks that during their school the learning of English language was not set with a purpose nor the teachers were aware of their responsibility.

### **B) Incompetent teachers**

According to the news published on March 10, 2010 In Indian Express, it has been noticed that there is a rapid growth of English medium schools in Gujarat. On the other hand, the growth does not equate to the quality of teachers. Therefore the English medium students suffer from an exposure of sub-standard English language teaching environment. The teachers who are appointed are the ones who took up English as their main subject at college level however their schooling is entirely from Gujarati medium. The teacher themselves are not confident about their spoken English, no wonder they are unable to improve the level of English among students. It's not only about English teachers, all the other subjects are also expected to be taught in English as the medium is English but then the teachers argue with the basic principle given by Gandhiji about teaching of subjects in their mother tongue for better understanding. The question arises, is one period of English enough for a person to learn English?

### **C) Lack of Infrastructure and overcrowded classrooms**

English, like other subjects also need various aids to support learning. Only textbook won't suffice. There should be language labs where equipment like tape recorder, headphones, computers, speakers, books, CDs, projectors, etc. are placed to enhance speaking skills of students. Very few schools have understood the need for the same and have established language labs. Though they provide separate labs, the equipment needed is not provided. Moreover our classrooms are overcrowded where almost 60-70 students

sit in one classroom. Thus it is very difficult to have an effective environment of learning language. Let's understand this situation with our own kids, imagine during the first language acquisition if the mother has been given the task of teaching 70 children to speak. Have you ever thought that how a teacher can teach students a completely new language to these many students? Thus both the reasons add on to poor speaking skills as students don't get external support or the teacher's support to improve nor do they get encouragement to learn the language.

These are some of the factors affecting spoken English in Gujarat. There are many more factors like the teaching method, examination system, textbooks, syllabus, etc., however for the time being we have just focused on the above mentioned factors.

**Note:** To improve spoken English one factor which is very important is that it needs to be spoken.

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***INTEGRATING TRIANGULATION INTO EDUCATIONAL RESEARCH  
PARADIGM***

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**Introduction**

Invariably the various sources reflect the view that the faculty of Education is still in its primitive stage and as to academic distinction it is yet to research far from its existing stage, the research in education is too prone for such comments. The view expressed as above is not just ignorable. The teaching is the mother of all professions; in this crux it is the duty as well as responsibility in the hands of stakeholders of educational fraternity to strengthen the research, theory building and construction of models. Where all the above said persuasive things are to come from and tested through research, the present paper throws some right on its research concern. The Educational research is akin to all types researches from basic, applied, historical, and ethnographic and so on. The various research paradigms have its own strengths in the back of its weakness. The nature of problem and context onto which research has to be carried out along with the reflection form review of related literature determines the design of the study, this paper purports to substantiate the educational research at complementary strength and as a result the weaknesses are minimised. In order to have complementary strength, triangulation into educational research is being investigated in this study.

**Conceptual Background of the Study**

***History of Triangulation***

The term triangulation has been in usage in the geometry with the notion of the process of determining the location of a point by measuring angles to it from known points at either end of a fixed baseline, rather than measuring distances to the point directly (Trilareratuion, Wille broad Snell, 1615-17).

### ***Triangulation in Social Sciences Research***

The concept of triangulation is traced from navigational and land surveying, in Social Sciences, triangulation is often used to indicate that two (or more) methods are used in a study in order to check the results. The idea is that one can be confident enough with a result, if different methods lead to the same result. It facilitates validation of data through cross verification from two or more sources. Triangulation is deserved to be employed in both quantitative and qualitative studies, where it serves as an alternate to traditional criteria like reliability and validity. By adopting triangulation into research paradigm, one can hope to overcome the intrinsic biases and short comings that come from single method, single – observer and single – theory studies.

### ***Integrating Triangulation into Educational research paradigm***

The understanding of human nature of learning and its social reality in the midst of so enmeshed as well increased complexity, poses threats to educational research, practice and other academic entities. The traditional in-practice single – method, single – researcher, single – data and single – theory research is relatively fragile in such a context. The above mentioned short comings would possibly tackled by compensating the strength of more than one - mode of research. The triangulation can be integrated into educational research in the following four ways (Denzin, 1978).

- 1. Data Triangulation** - Using variety of data sources and sets of data in a study. Data may be both qualitative and quantitative, collected by various methods or by the same



method from different sources or at various times.

- 2. Investigator Triangulation** - Use of several different researchers. The access and availability of partnership and team work is underlined as the way of focusing on various perspectives.
- 3. Methodological Triangulation** - Using multiple methods to study a single problem or phenomenon. It also could be of same method on different occasions and situations.
- 4. Theory Triangulation** - Use of different theoretical propositions to determine competing hypotheses as well as for inferring the single set of data.

The concept of triangulation protrudes from the assumption that applying several data sources, methods and investigation would naturalize bias in one particular data sources, investigator or method (Jick, 1979). Having reference to Educational research as proposed by Nigals (1999), the various levels of triangulation of research in practice is illustrated with the following diagram.

different schools of thought:

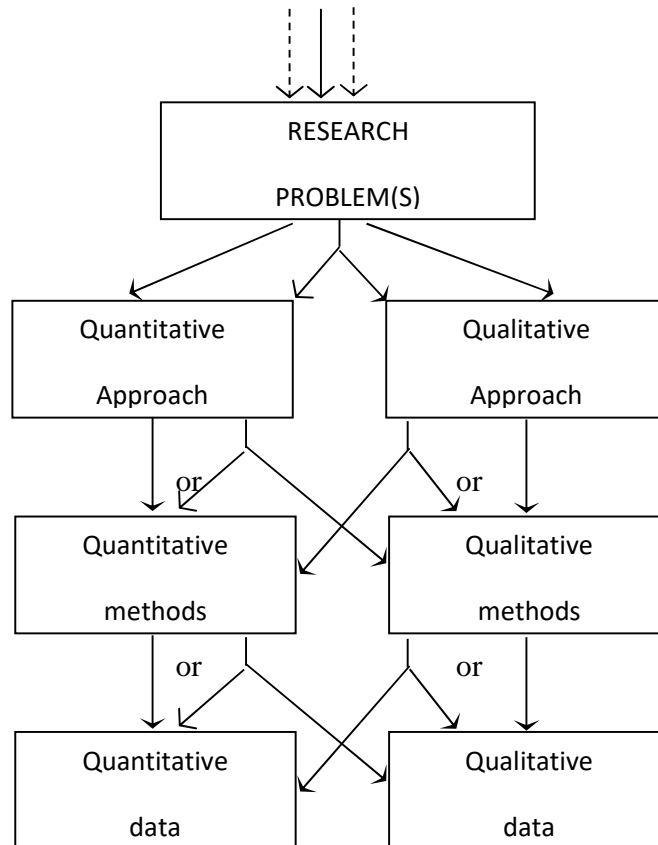
epistemological  
 philosophical level:

different research traditions

methodological  
 level

technical  
 level

data



**Fig. 1: Levels of triangulation of educational research in practice**

**The Problems hidden behind triangulation**

Besides the promising perspectives of triangulation, as a word of caution, the hidden problems in triangulation of research are as follows,

1. Quantitative and qualitative research have different preoccupations, it is questionable whether they are tapping the same things when they are used to examine similar issues apparently.

2. If quantitative and qualitative findings do not confirm each other how the researchers respond.
  3. In the cases of conflict in results what does it actually mean and comprise.
- Thus, triangulation of research is not as unproblematic as it may appear.

### **Objectives of the Study**

The following are the objectives of the present study,

- To find out the experiences of educational researchers with triangulation of research paradigm.
- To enlist the various experiences and levels of triangulation of research paradigm.
- To study the extent to which triangulation of research paradigm is in use.
- To investigate the problems encountered by researchers in relation to triangulating research design.
- To study the problems faced by the researchers while triangulating their research paradigm, using the selected demographic variables, such as (a) Gender (b) Institutional (c) Qualification level (d) experience

### **Hypotheses of the Study**

1. There exists significant difference between male and female researchers in integrating triangulation into their research paradigm.
2. There exists significant difference between university and college scholars in integrating triangulation into their research paradigm.
3. There exists significant difference between male researchers of college and university in integrating triangulation into their research paradigm.
4. There exists significant difference between female researchers of college and university in integrating triangulation into their research paradigm.
5. The qualification level exerts significant difference in integrating triangulation into their research paradigm.

6. The experience of research exerts significant difference in integrating triangulation into their research paradigm.
7. There exists significant difference between course work researchers (for M.Ed., M.Phil., and Ph.D.) and further researchers (Post doc, major projects, minor projects, etc.,) to triangulate their research paradigm.

### **Methodology**

Triangulated method of research was adopted for the present investigation. Triangulation of survey with reflection analysis design was employed in the present study. The survey served as quantitative aspect of the study and reflection analysis served the qualitative aspect of the study. The qualitative and quantitative methods were independent throughout the study. The research design was triangulated into three levels viz. data triangulation, methodological triangulation and theoretical triangulation.

A total of 102 researchers/scholars doing educational research in various colleges and university departments of Trichy, Thanjavur, Ariyalur and Perambalur districts constitute the sample for the present study. The sample was selected through purposive sampling technique. The present study employed the following tools in conformity to research design, i) Questionnaire ii) Reflection Sheet

Since the study employed purposive sampling, the sample researches are in touch with the investigator. The respondents were asked about their opinion and the tools were supplied to them and the same were collected back. The Collected data were processed and subjected to analysis. Appropriate analysis of data has been made to test the hypotheses.

### **Analysis of reflection sheet (Qualitative data Analysis):**

In order to make the present study as triangulated one to study the integration of triangulation into educational research paradigm, the present study employed methodological data and theoretical triangulation. Reflection sheet captured data have

been subjected to contextual in depth qualitative analysis and interpreted in the light of quantitative data.

**Table 9**

**Summary of data analysis and results of triangulation**

Summary of findings and triangular analysis of data are tabulated hereunder

Sl. No	Variable	Quantitative data results (1)	Qualitative data results (2)	Issues not confirmed by data	Results of methods of the 1+2
1.	Gender	<p>Male and Female researchers significantly vary to have their research paradigm as triangulated ones.</p> <p>Female researchers are in advantageous position to make their research paradigm with triangulation in their studies.</p>	<p>Both male and female researchers indicated triangulation as their secondary option.</p> <p>Both male and Female researchers appear to be confined by time limits to skip the triangulated research design.</p> <p>Non-obligation to adopt the triangulated research design is being expressed as an advantage to skip the same by both gender researchers</p>	<p>The reasons why not triangulation is enforced and practice in the colleges and university departments.</p>	<p>Researchers need to be more aware about triangulation of research and the complementary strength of research findings and fragile-free generalization of findings of the study.</p>
2.	Institutional Status	<p>Institutional status is mute to variate the scholars' standpoint to triangulate their</p>	<p>Either type of institutes made it mandatory to employ triangulated</p>	<p>If not made obligatory, why not the triangulation is advised for</p>	<p>Both type of institutes should disseminate triangulated</p>

		<p>research.</p> <p>Gender male vs institutional status are in line to decide about triangulation of research paradigm.</p> <p>Gender female vs institutional status is significantly varying and the university female researchers are ahead of college female researchers.</p>	<p>research design.</p> <p>Male researchers tend to give more weightage for quantifiable data alone.</p> <p>University female researches are allowed free expression of their research views.</p>	<p>research design.</p> <p>The sources which intrigued to attach more weightage for quantifiable data.</p> <p>The factors influencing free-expression of university female researchers and the reasons for college female researchers to fold their expressions.</p>	<p>research designs and make available number of literatures with triangular design studies.</p> <p>Both types of research institutes should make arrangements to have research colloquium with invited experts to have a free and open environment to encourage the research outcome.</p>
3.	Qualification Level	<p>The qualification level for which the research is undertaken exerts a significant difference in integrating triangular research design.</p>	<p>Post Graduate level scholars thought that a superficial level of study is enough to complete the course.</p> <p>M.Phil., and Ph.D., researchers are possessing advanced knowledge about the merits of triangular research design, yet into practice they did not prefer to employ triangular design for the reasons of haste, non-obligatory, paucity of time,</p>	<p>Why none of the Post graduate scholars come forward to have triangular research design.</p> <p>The gulf between theory and practice is not encouraged by the system, but why it still persists.</p> <p>How a few funded researchers also reflect the confinements for not accommodating triangular research design.</p>	<p>The technique of triangulation has to be brought into the syllabus of post graduate and other research courses and the scholars should be motivated to explore their studies with triangular design.</p> <p>The various levels of triangulation and their strengths over weakness of single paradigm must be referred in the furtherance of researches undertaken and as a</p>

			<p>additional efforts required and constraints of expenditure.</p> <p>The funded researchers are employing the triangular design and aspire to make their study with least negative criticism and maximize the generalisability of their findings.</p>		<p>result the followers could explore with triangular design.</p> <p>The funding agencies at the time of presentation of research proposal should insist the researchers to make use of triangular design and the periodical review should reflect the same.</p>
4.	Experience in research	<p>Experience in research play a pivot role to employ the triangular research design.</p>	<p>The researchers possessing experience around 10 years reflect the complementary nature of triangular studies and to the extent possible incorporate the same in their research works.</p> <p>The researchers having experience around 5 years, view triangular research design as one of the other methods of inquiry and did not reflect the complementary strength of triangulation over single method</p>	<p>Why the debut researchers ignore the triangulated studies while collecting literature review and why not they had an insight over the mixed methods that they come-across in their research progression.</p>	<p>The research supervisors should encourage budding scholars to throw light on strengths and weakness of each and every single – method study and the complementary strength of triangular research design.</p> <p>The new researchers should be sensitized to explore the weakness of their research and to find the means to substantiate them with triangulated research design in</p>

			studies.		the light of possibilities (with a note of caution).
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### **Implications for Educational Research**

The following implications have been drawn from the present investigation to educational research

1. The existing researchers have triangulated research paradigm to a least considerable extent and it has to be improved and refined, to avail the fullest potentials of triangulation of research paradigm in education.
2. The existing orientation program offering institutes and other research institutes should make some effort to familiarize the triangular research paradigm and help the researches to bring it to their hands-on, to facilitate them to gain first hand knowledge about the paradigm with hidden cautionary notes.
3. The various research funding organizations such as UGC, NCERT and ICSSR should recognize the convergence and complementary strength of research through triangular design and encourage the researchers to employ such paradigms in the funded researches.
4. The Educational research stakeholders such as SCHEs, Universities, CTEs and Councils of research should put some effort to organize seminar, workshop, symposium and conference over the theme to familiarise the triangular research design among debut scholars and may consider to accommodate the same in their research methodology theory and practicum in masters and research courses.

### **Conclusion**

The very aim of conducting research is to verify the theories existing and from that longing for newer possibilities and novel ideas. The educational researches are conducted for vital purposes by various stakeholders and so the outcome of educational research should be fade-proof one and having the credibility of adapting to grass-root settings. In order to achieve this essence of research it is advisable to employ triangulated research



design rather than the traditional single-method design. The present study concluded in a nutshell, the existing level of triangulation into educational research has to be improved in all levels of triangulation. Though, the triangular studies are not unproblematic, the credits of convergence of results and complementary effects of more than one method, outweigh the hidden problems. The triangular design with proper synthesis brings the depth visions that are not touched through single method studies of either qualitative or quantitative designs. Shrewdness should be inculcated among researchers to knit-the-designs aptly appositely to the objectives and contextual circumstances of the investigation.

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***EFFECTIVENESS OF CONCEPT ATTAINMENT MODEL AND TRADITIONAL  
METHOD FOR ACQUISITION OF MATHEMATICS CONCEPTS IN  
CLASS XII***

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**Introduction**

Teaching is often thought as something that comes naturally to people who know their subject. But teaching is an intriguing, important and complex process. It takes place in a complicated social institution which is filled with diverse people. The teacher must learn to control five processes of teaching: (i) Making and using of knowledge, (ii) Shaping the school, (iii) Teaching with strategy, (iv) Creating interpersonal climates and (v) Controlling a teaching personality.

Bruner also emphasized four major features of theory of instruction in effective teaching. Predisposition towards learning structured body of knowledge, Sequences of material to be learnt and Nature and paving of reward and punishment. However teacher does broadly remain pivot around which the entire process revolves in the formal system. During the last two decades many new methods of teaching and training have been developed, tested, modified and adopted to different kinds of teaching learning situation. Model of teaching is an innovative method of teaching. There is need to direct efforts towards transformation of teaching methods right upto development of science and technology, curriculum and material research along with teacher orientation to receive attention. The ultimate responsibility of information processing has been enshrined by the society in teachers. Thus a theory of teaching must attempt to set forth the means of maximizing learning on the part of children. For achieving needed learner behaviour intellectual development and acquisition of knowledge and specific mental process like

reasoning, scientific creativity be primary concerns for effective and efficient information processing.

In the concern Joyce has stated, "To provide an all-round development we need to design suitable instructional strategies which helps our students grow emotionally, physically, socially and intellectually. There still exists a big gap between theoretical knowledge and actual teaching in classroom or schools. Models of teaching as strategies need to be incorporated in our teaching practice." A variety of teaching approaches have been evolved to design instruction.

### **Concept Attainment Model (CAM)**

The term Concept Attainment Model is historically linked with the work of Jerome S. Bruner and his associates. This Model is intended to teach specific concepts by comparing and contrasting examples that contain the concept with examples that do not contain the concept. It is built up from Bruner's work on the cognitive activity called categorizing. He is of the opinion that categorizing helps to reduce the complexity of environment and necessity for concept learning.

### **Objectives of the Study**

- i. To compare the adjusted mean scores of mathematics concept understanding of concept attainment model group and traditional method group by considering pre-mathematics concept understanding and intelligence as a covariates.
- ii. To compare the mean scores of students liking of concept attainment model and traditional method group.
- iii. To study the effect of treatment, sex, and their interaction on mathematics concept understanding by considering pre-physics concept understanding and intelligence as covariates.
- iv. To study the effect of treatment, intelligence, and their interaction on physics concept understanding by taking pre-mathematics concept understanding as a covariate.

### **Hypotheses**

- i. There will be no significant difference in adjusted mean scores of mathematics concept understanding of concept attainment model group and traditional method group by considering pre- mathematics concept understanding and intelligence as covariates.
- ii. There will be no significant difference in mean scores of students liking of concept attainment model and traditional method groups.
- iii. There will be no significant effect of treatment, sex and their interaction on mathematics concept understanding of students when pre- mathematics concept understanding and intelligence are taken as covariates.
- iv. There will be no significant effect of treatment, intelligence and their interaction on mathematics concept understanding when pre- mathematics concept understanding is taken as a covariate.

### **Methodology**

Experimental research method was adopted in the present study. The data required for the present study were collected through achievement tests (pre-test & post-test), students liking scale and Raven's standard matrices scale.

For the present study the stratified random sampling technique was used to select 60 students of class XII from P.D.J. Pre-University College, Bijapur (Karnataka).

Before starting the experiment, all the 60 students of class XII were given pre-test on mathematics topics. Differential Calculus, Integration, Analytical Geometry were the topics selected for study. Two equal groups, 30 students each, were chosen. The age range of the two groups was also equal. The group A was taught by concept attainment model and group B was taught by the traditional method. Two groups were taught on the alternative days for one month and after one month, post-test was administered to the two groups. The scores obtained at pre-test and post-test were recorded. Students liking was assessed with the help of students liking scale developed by Malhotra and Passi. Intelligence score of two groups was obtained by administering Raven's Standard Matrices Scale. In order to interpret and test the hypotheses stated in the study, the following statistical techniques were employed i.e. (i) t-test and (ii) F-ratio (ANCOVA).

**Results and Discussion**

*i. Effectiveness of CAM*

The data related to first objective was analyzed with the help analysis of covariance.

**Table 1**

Summary of ANCOVA for mathematics concept understanding by considering pre-mathematics concept understanding and intelligence as covariates

Source of variance	Df	Sum of squares	Mean squares	F- value
Treatment	1	835.18	835.18	25.03**
Error	58	1935.02	33.36	
Total	60	88671.00		

**\*\*Significant**

From table 1, it is observed that the adjusted F-value is significant at 0.01 level with  $df = 1/58$ . It indicates that adjusted mean scores of CAM and TM groups differ significantly when pre-mathematics concept understanding and intelligence were considered as covariates. In the light of this the first hypotheses  $H_1$  is rejected. Further, the adjusted mean scores of CAM group were 41.45 which are significantly higher than that of TM group whose adjusted mean score was 32.60. It reflects that treatment given to the CAM group was found to be significantly superior to Traditional Method of teaching. It may, therefore, concluded that CAM was found to be superior to TM.

*ii. Students liking of CAM*

The data related to second objective was analyzed with the help of t-test.

**Table2**

Group wise M, N, S.D., and t-value of students liking

Group	M	N	S.D.	t-value
CAM	138.42	30	11.05	8.48**
TM	116.57	30	8.94	

**\*\*Significant**

From table-2, it is observed that the t-value is 8.48 which is significant at 0.01 level. It indicates that mean scores of students liking of CAM and TM groups differ significantly. In this context the second null hypotheses  $H_2$  is rejected. Further, from table-2, it can be seen that mean score of students liking of CAM group was found to be significantly superior to TM group. It may, therefore be said that students of CAM group were found to have significantly higher students liking in comparison to students of TM group.

**iii. Effect of treatment, sex and their interaction on physics concept understanding**

The data for third objective was analyzed with the help of factorial analysis of covariance. The results are given below in table-3

**Table 3**

Summary of 2\*2 factorial design when pre-mathematics concept understanding and intelligence are taken as covariates

Source of variance	Df	Sum of squares	Mean squares	F-value
Sex	1	1.98	1.98	0.60
Treatment	1	828.19	828.19	25.15**
Sex*Treatment	1	24.81	24.81	0.75
Error	56	1844.168	32.932	
Total	60	88671.00		

**\*\*significant**

From table-3, it can be seen that F-value of treatment is significant at 0.01 level which indicates that mean scores of mathematics concept understanding of students taught through CAM and TM differ significantly when pre-mathematics concept understanding was taken as a covariate. In this context of treatment the third hypotheses is rejected. Further , the adjusted mean scores of mathematics concept understanding of CAM group was 41.45 which is significantly higher than TM group whose adjusted mean score was 32.6. It may, therefore, be concluded that CAM was found to be significantly superior in comparison to TM.

The adjusted F-value for sex is 0.60 which is not significant. In this context the third hypotheses is not rejected. It may, therefore, be concluded that mathematics concept understanding was found to be independent of sex when pre- mathematics concept understanding was taken as covariate. The adjusted F-value for interaction between sex and treatment is 0.75 which is not significant. In this context also the third hypotheses is not rejected. It may, therefore, be concluded that mathematics concept understanding was found to be independent of interaction between treatment and sex.

*iv. Effect of treatment, intelligence, and their interaction on Physics concept understanding*

The data related to last objective was analyzed with the help of ANCOVA.

**Table-4**

Summary of 2\*2 factorial design ANCOVA

Source of variance	Df	Sum of squares	Mean square	F-value
Treatment	1	445.40	445.40	11.74**
Intelligence	1	73.03	73.03	1.93
Treatment*Intelligence	1	19.55	19.553	0.52
Error	57	2161.06	37.93	
<b>Total</b>	60	89411.00		

**\*\*Significant**

From table-4, it can be seen that F-value of treatment is 11.74 which is significant at 0.01 level. In the context of treatment the last hypotheses is rejected. Further the adjusted mean score of physics concept understanding of CAM group was 41.45 which are significantly higher than TM group whose adjusted mean score was 32.60. It may, therefore, concluded that CAM was found to be significantly superior in comparison to TM.

The adjusted F-value for intelligence is 1.93 which is not significant. Thus in this context the last objective is not rejected which concluded that mathematics concept understanding was found to be independent of intelligence when pre-mathematics concept understanding score was taken as a covariate.

For interaction between treatment and intelligence the adjusted F-value is 0.52 which is not significant. In this context also the last hypotheses is not rejected which concluded that mathematics concept understanding was found to be independent of interaction between treatment and intelligence when pre-mathematics concept understanding was taken as a covariate.

### **Educational Implications**

As the present study review that Concept Attainment Model was effective in terms of mathematics concept understanding of students, hence CAM should be used by the college teacher in class room teaching specially in teaching mathematics concepts. In order to orient the interest of teachers towards use of CAM in class room teaching, workshops and seminars should be organized.

### **Conclusion**

On the basis of the results drawn and discussion with the mathematics teachers of Pre-University College of Bijapur district, the following conclusions have been drawn:

- Concept Attainment Model of teaching is superior and effective in terms of mathematics concept understanding of students in comparison to Traditional Method.
- Concept Attainment Model has significantly higher students liking in comparison to Traditional Method.

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***ISSUES PROVOKING SCHOOL CHILDREN'S ENGLISH SPEAKING SKILLS***

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**Introduction**

English is considered the most prestigious and dominating language in the world. Without its learning no country in the world can imagine to compete the pace of development as it is essential in the field of business, commerce, trade, communication, science & technology and especially in education. Keeping in view the importance of ESL, government has introduced many policies to learn English as compulsory subject at all levels. But no reasonable improvement has been observed in this regard.

The language is a system of random vocal symbols, which authorises all people in a given culture, or other individuals who have learnt the system of that culture, communication or to interact. By speaking, we do not mean simply uttering words through mouth. It means conveying the message through the oral words. This skill is also neglected in our class rooms. India had been ruled by the Great Britain. Owing to the rule of British, English language became the official language of this territory. After independence, English language maintained its status as official language in India. Our society is multilingual society. Our official, instructional and institutional languages are English and Hindi. Battle & Lewis (2002) says that education plays a vital role in the development of human capital and is linked with an individual's well-being and opportunity for better living. India is one of those countries where English is fast spreading. According to Parveen, S. (2013) in her article "A Study on Attitudes towards Varieties of Spoken English in Indian Context" referred to Bolton (2008, as cited in Raza, 2008), out of 180 million population, 11% speak English in India making it the third largest Asian country with 20 million

(Approx.) speakers. Hence Indian schools has given more importance to English Language. Teachers in schools make their best attempt to provide the knowledge of English language to students but it was observed that Students do not get any chance either in the class room or outside to express their views in English. Speaking is not a part of our examinations. Learning to speak also demands a lot of practice and attention. We learn to speak our mother tongue just by listening and repeating. The teacher can adopt the same natural way. He can provide them certain structures and ask them to repeat. This will remove their bashfulness. He can give those trainings in the basic style of language. Asking short questions and the use of short dialogues in the class room can also develop this skill.

### **Review of Related Literature**

#### **What is Language?**

Language is a formal system of signs governed by grammatical rules of combination to communicate meaning. This definition stresses the fact that human languages can be described as closed structural systems consisting of rules that relate particular signs to particular meanings (Bloomfield, 1914). Language is basically a speech. Its written form developed later on. It is universal among human beings who use it for carrying out various activities of life. It is such a common phenomenon that we always take it for granted. We never bother to think about it: we never try to into the depth of the meaning of this word. Definition of language is not difficult to find. Almost all well-known linguists have tried to define language in their own way. John Lyon (2002), in his famous book "Language and Linguistics" has discussed five famous definitions of Language

- i. According to E.Sapir (1921): “Language is a purely human and non-instinctive method of communicating ideas, emotions unit desires by means of voluntarily produced symbols”.
- ii. B. Bloch and G.L. Trager (1942) write: “A language is a system of arbitrary vocal symbols by means of which a social group co-operates”.

- iii. R.A. Hall (1968) tells us that language is “the institution whereby humans communicate and interact with each other by means of habitually used oral-auditory arbitrary symbols”.
- iv. R.H. Robins (1979) does not give a formal definition of language but points out certain facts related to language, saying that “languages are symbol systems, almost wholly based on pure or arbitrary conventions”.
- v. According to N. Chomsky (1969) a language is “a set of sentences, each finite in length and constructed out of a finite set of elements”.

Most of them have taken the view that languages are systems of symbols designed for the purpose of communication. So an operational definition of language may be:

“Language is a system of arbitrary symbols for human beings’ communication in speech and writing, that is used by the people of a particular community”. In this definition, the various components of language, or certain words need explanation:

**System:** Written words or spoken sounds arranged in a particular order.

**Communication:** Hearing or reading and responding to the spoken or written words

**Arbitrary:** The word “arbitrary” means not based on a reason, system or plan

**Symbol:** A symbol is a letter or a word or a sound that suggests an idea.

Another simpler definition may be:

*“Language is a system of arbitrary symbols which help the people of a particular community to communicate and to interact”.* This definition clarifies that

1. Every language operates within its own system.
2. Every language has its own arbitrary symbols.
3. The words “communicate and interact” mean to understand and to speak.

### **Stages of Language Learning**

People learning a second language use the same natural processes that are used to acquire their first language from the first days of exposure to the new language in spite of their age. They reach similar developmental stages to those in first language acquisition, making some of the same types of errors in grammatical markers that young children make, picking up pieces of language without knowing precisely what each word means, and relying on sources of input humans who speak that language-to provide modified speech that they can at least partially comprehend (Collier, 1998). Second language learners are usually observed developing a new language system that includes elements from the native language and elements from English they recently learned.

Inter-language actually helps second language learners test hypotheses about how language works and develop their own set of rules for using language.

#### **Stage I: Pre-production**

This is the silent period. Here beginners only listen but rarely speak. English language learners may have some words in their receptive vocabulary but they are not yet speaking. Some students will be able to repeat only everything that someone says. They are not really producing language but are just imitating. Students may duplicate gestures and movements to show comprehension. Teachers should focus attention on listening comprehension activities and on building a receptive vocabulary because English language learners at this stage will need much repetition of English.

#### **Speaking Skills**

The learner can hardly understand anything at all, unless the speaker is talking about things the learner is observing, or unless the language being learned is closely related to some other language the learner knows. Through comprehension activities the learner can internalize some vocabulary and some grammatical structures, which will help the learner to understand more in stage two, when he or she knows enough to actually converse in a simple way. The result of getting through stage one is that the learner has acquired enough of the basic building blocks of the respective language to begin to function in real communication situations in a hesitant way. In stage one there is scanty real speaking

ability will be seen, apart from some words and sentences that can be built on the comprehension exercises. In real communication situations the learner has to depend on memorized survival phrases to meet the most immediate needs.

### **Stage II: Early production**

At this stage students try to speak some words. Students can use short language chunks that have been memorized although these chunks may not always be used correctly. Learner listen more their talkative classmates and extend his vocabulary.

#### **Speaking Skills**

In stage two inputs is comprehensible if the learner already knows the non-linguistic content what he or she is hearing or if the communication situation is very predictable. There are more genuine two-way conversations with speakers of the language, although it takes a very patient native speaker to persevere in trying to communicate with a learner at this stage. The result of getting through stage two well is quite a bit of "fluency" in comprehending language which uses a variety of structures in connected discourse, with an ever growing vocabulary. In stage two, the learner is able to speak well in tasks that are fairly structured and predictable.

### **Stage III: Speech emergence**

At this stage, Students have a good vocabulary of words and uses simple phrases and sentences in his communication with others. They are able to ask simple questions, which may be grammatically correct or wrong. Students try to initiate short conversations with classmates. They are able to read and understand easy stories.

#### **Speaking Skills**

In stage three the learner can understand new information, but it still helps if that information is still specially geared to a new speaker's needs. This means that meanings must often be negotiated. In order to keep increasing in comprehension fluency during this stage, the key ingredient is coming to understand the background information that everyone in the culture knows about, and in particular, learning this information in connection with the language that is associated with them. Because the learner can by now understand a lot of the linguistic content, it is possible to develop more ability for

top-down processing of "new" information of the nonlinguistic content. If there is adequate input, the learner should be developing a sense of the different discourse genres and registers of speech. The result of getting through stage three is that the learner is able to comprehend language related to a vast range of topics, situations and contexts, as well as easily process many social nuances. In stage three, the learner has increasing facility to produce connected narrative discourse.

#### **Stage IV: Intermediate fluency**

At the stage of intermediate fluency, English language learners able to use more complex sentences in speaking and writing to express opinions and share their thoughts. They are able to ask questions to clarify what they are learning in class. Learners are able to work with some teacher support. Comprehension of all subjects' content is increasing. At this stage, students are able to use different strategies to learn content in English. Teachers have to focus on learning strategies. Students in this stage can understand more complex concepts.

#### **Speaking Skills**

In Stage Four the learner learns most from normal native-to-native speech as it occurs in the whole range of life experiences. The learner will understand most input, provided he attends to it. For example, native speakers may talk about the learner right in his presence, intending to tease him and get a reaction. He will certainly hear that they are talking, but may not in the deeper sense "hear" a thing they say, unless he is attending to it. In Stage Four, the learner has increasing facility in abstract and hypothetical discussions

#### **Stage V: Advanced Fluency**

Student at this stage will be near-native in their ability to perform in content area learning. Students have needed continuous support from classroom in reading writing and speaking.

#### **Speaking Skills**

In Stage five, the learner has increasing facility in discussions using his vocabulary without any proper preparation.

### **Why Speaking Skills**

Speaking is productive skill in the oral mode. It is like the other skills, is more complicated than it seems at first and involves more than just pronouncing words.

### **Listening Situations**

There are three kinds of speaking situations in which we find ourselves:

- Interactive
- Partially Interactive
- Non-Interactive

Interactive speaking situations include face-to-face conversations and telephone calls, in which we are alternately listening and speaking, and in which we have a chance to ask for clarification, repetition, or slower speech from our conversation partner. Some speaking situations are partially interactive, such as when giving a speech to a live audience, where the convention is that the audience does not interrupt the speech. The speaker nevertheless can see the audience and judge from the expressions on their faces and body language whether or not he or she is being understood.

Some few speaking situations may be totally non-interactive, such as when recording a speech for a radio broadcast.

### **Teaching Speaking**

Many language learners regard speaking ability as the measure of knowing a language. These learners define fluency as the ability to converse with others, much more than the ability to read, write, or comprehend oral language. They regard speaking as the most important skill they can acquire, and they assess their progress in terms of their accomplishments in spoken communication.

Language learners need to recognize that speaking involves three areas of knowledge:

- Mechanics (pronunciation, grammar, and vocabulary): Using the right words in the right order with the correct pronunciation



- Functions (transaction and interaction): Knowing when clarity of message is essential (transaction/information exchange) and when precise understanding is not required (interaction/relationship building)
- Social and cultural rules and norms (turn-taking, rate of speech, length of pauses between speakers, relative roles of participants): Understanding how to take into account who is speaking to whom. in what circumstances, about what, and for what reason.

In the communicative model of language teaching, instructors help their students develop this body of knowledge by providing authentic practice that prepares students for real-life communication situations. They help their students develop the ability to produce grammatically correct, logically connected sentences that are appropriate to specific contexts, and to do so using acceptable (that is, comprehensible) pronunciation.

### **Strategies for Developing Speaking Skills**

In communicative output, the learners' main purpose is to complete a task, such as obtaining information, developing a travel plan, or creating a video. To complete the task, they may use the language that the instructor has just presented, but they also may draw on any other vocabulary, grammar, and communication strategies that they know. In communicative output activities, the criterion of success is whether the learner gets the message across. Accuracy is not a consideration unless the lack of it interferes with the message.

In everyday communication, spoken exchanges take place because there is some sort of information gap between the participants. Communicative output activities involve a similar real information gap. In order to complete the task, students must reduce or eliminate the information gap. In these activities, language is a tool, not an end in itself. In a balanced activities approach, the teacher uses a variety of activities from these different categories of input and output. Learners at all proficiency levels, including beginners, benefit from this variety; it is more motivating, and it is also more likely to result in effective language learning. Students often think that the ability to speak a language is the product of language learning, but speaking is also a crucial part of the language learning process. Effective instructors teach students speaking strategies --

using minimal responses, recognizing scripts, and using language to talk about language - which they can use to help themselves expand their knowledge of the language and their confidence in using it. These instructors' help students learn to speak so that the students can use speaking to learn.

### **Using Minimal Responses**

Language learners who lack confidence in their ability to participate successfully in oral interaction often listen in silence while others do the talking. One way to encourage such learners to begin to participate is to help them build up a stock of minimal responses that they can use in different types of exchanges. Such responses can be especially useful for beginners. Minimal responses are predictable, often idiomatic phrases that conversation participants use to indicate understanding, agreement, doubt, and other responses to what another speaker is saying. Having a stock of such responses enables a learner to focus on what the other participant is saying, without having to simultaneously plan a response.

### **Recognizing Scripts**

Some communication situations are associated with a predictable set of spoken exchanges -- a script. Greetings, apologies, compliments, invitations, and other functions that are influenced by social and cultural norms often follow patterns or scripts. So do the transactional exchanges involved in activities such as obtaining information and making a purchase. In these scripts, the relationship between a speaker's turn and the one that follows it can often be anticipated. Instructors can help students develop speaking ability by making them aware of the scripts for different situations so that they can predict what they will hear and what they will need to say in response. Through interactive activities, instructors can give students practice in managing and varying the language that different scripts contain.

### **Using Language to Talk About Language**

Language learners are often too embarrassed or shy to say anything when they do not understand another speaker or when they realize that a conversation partner has not understood them. Instructors can help students overcome this reticence by assuring them that misunderstanding and the need for clarification can occur in any type of interaction,

whatever the participants' language skill levels. Instructors can also give students strategies and phrases to use for clarification and comprehension check.

By encouraging students to use clarification phrases in class when misunderstanding occurs and by responding positively when they do, instructors can create an authentic practice environment within the classroom itself. As they develop control of various clarification strategies, students will gain confidence in their ability to manage the various communication situations that they may encounter outside the classroom.

### **NATURE OF THE STUDY**

The study was designed to investigate the factors effecting students' English speaking skills at secondary level. The study was planned on export fact design descriptive research.

### **Population**

The population for the study was consisted of the following are comprise of:

- a) All teachers teaching English to classes 9<sup>th</sup> to 10<sup>th</sup> in the province of Gujarat.
- b) All 9<sup>th</sup> to 10<sup>th</sup> grade students of public school in the province of Gujarat.

### **Sampling**

Twenty schools were randomly selected from Vadodara district representing equally M/F and R/U. Twenty students and eight teachers from each school were selected randomly. Bifurcation of teachers and students from each stratum is shown in table 1.

Table 1: Sample

Stratum	Location		Gender	
	Rural	Urban	Male	Female
Students	200	200	200	200
Teachers	80	80	80	80

### Instrumentation

Two questionnaires (Three point Likert type scale) for students and teachers were developed respectively. Each questionnaire was consisting of ten statements. The questionnaires were tryout and piloted before finalization. After tryout and piloting questionnaires were reviewed by three experts and five doctoral research fellows. The reliability coefficients of point bi-serial correlation  $\alpha$  for teachers' and students' questionnaire were 0.91 and 0.89 respectively.

### Data Collection

Ten data collectors were trained for data collection. Each data collector collected the data from two schools. The teachers and students were given questionnaires which were dully filled in the presence of the data collectors. Therefore the data was collected in same from all schools. The data was arranged in the tabular form and percentage of each frequency was calculated.

### Data Analyses

The teachers' data is analysed and results are tabulated as under. Frequencies and percentages are calculated for analyses

Table 2: Teachers' data

Statement	Response	Male						Female						U- (M/F)		R- (M/F)			
		U		R		Total		U		R		Total							
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%		
Do you use English as medium of instruction for teaching of English in	Yes	3		2	8	2	5	5	6	2	8	7	8	2	3	6	7	2	3
	No	8	2	0	4	1	1	1	4	1	6	4	2	0	25	1	1	2	2

your class?	Some Time	0	1	4	1	2	8	2	6	4	2	1	3	4
		0	6	0	6	0	0	0	0	4	15	8	0	2
Do you think competency in communication in English is very necessary?	Yes	3	6	9	1	4	5	6	4	6	2	3	3	6
	No	0	0	2	1	3	1	1	4	0	0	4	5	4
	Some Time	4	1	0	2	3	1	2	1	3	2	7	4	1
		0	0	2	0	6	0	2	0	8	0	0	50	6
Do you think English is better medium of instruction than Gujarati?	Yes	2	8	7	2	5	4	6	4	6	0	5	4	5
	No	1	3	2	1	3	2	3	1	3	2	2	2	3
		2	0	0	2	0	4	0	8	0	0	25	4	0
	Some Time	0	0	8	0	8	0	4	0	2	0	6	20	4
Do you teach through interactive techniques?	Yes	2	8	7	2	3	4	2	3	8	0	5	5	6
	No	4	1	0	2	5	2	3	4	0	8	0	2	15
	Some Time	8	2	0	1	3	2	2	1	1	3	1	6	20
		0	0	8	0	0	5	4	0	2	0	6	20	2
Do your students respond in English?	Yes	1	2	3	1	1	2	8	7	0	2	4	5	0
	No	1	3	2	7	4	5	4	1	1	3	1	6	20
		2	0	8	0	0	0	4	0	2	0	6	20	6

	Some Time	16	40	28	20	24	30	28	20	28	70	36	24	30	36	45
Do you promote participatory techniques of teaching in English?	Yes	0	30	82	30	42	20	12	38	20	80	70	40	12	50	25
	No	24	60	44	08	12	35	12	30	00	12	15	36	45	44	55
	Some Time	16	40	44	10	20	25	16	40	12	38	20	35	42	16	20
Do you use mothertongue while teaching English?	Yes	12	30	00	02	15	05	00	82	08	10	25	18	15	80	01
	No	60	42	80	74	45	50	05	28	02	65	56	45	60	75	05
	Some Time	12	30	12	30	24	30	05	00	20	25	32	40	12	15	55
Do you use other material for the enhancement of speaking skill of the students?	Yes	05	28	70	48	60	80	20	23	20	25	28	35	40	50	00
	No	40	12	12	30	16	20	64	40	40	50	00	20	25	36	55
	Some Time	16	40	00	06	12	50	40	41	20	25	22	40	45	45	55
Does your school have English	Yes	24	60	20	50	44	54	20	66	64	40	50	88	60	36	45

speaking environment?	No	1	0	1	0	4	0	1	0	1	0	2	30	4	0	4	0	
		2		2				2		2		4						
	Some Time	4	1		2	1	1	4	1	2	3	1			1	2	2	
		0	8	0	2	5		0		0	0	6	20	8	0	0	5	
Do the teachers teaching English interact with one another in English?	Yes	2	4	6	1	3	3	4	6	4	4	1	2	4	5	1	2	
		0																
	No	0	0	1	2	3	0	2	3	1	0	2	30	0	0	4	5	
	Some Time	1	2	1	2	3	4	2	6	2	6	4	8	60	4	5	4	5
		6	0	6	0	2	0	4	0	4	0	0						

The students' data is analysed and results are tabulated as under. Frequencies and percentages are calculated for analyses Table 3: Teachers' data

Statement	Response	Male						Female						U-		R-	
		U		R		Total		U		R		Total		(M/F)		(M/F)	
		f	%	F	%	f	%	f	%	f	%	f	%	f	%	f	%
Does your teacher use English as medium of instruction for the teaching of English in	Yes	2	0	1	2	3	16	1	2	12	20	32	16	32	16	32	16
	No	4	8	7	6	12	62	4	0	40	68	10	8	88	44	14	70

your class?	Some Time	3	2	32	1	2	12	44	22	8	48	12	12	60	30	80	40	24	12
Do you think English is better medium of instruction than Gujarati?	Yes	6	4	64	2	4	2	88	44	6	96	40	40	6	68	0	80	64	32
	No	1	2	12	6	4	64	76	38	4	4	60	60	64	32	16	8	4	62
Does your teacher speak Gujarati while teaching in the class?	Some Time	2	4	24	1	2	12	36	18	0	0	0	0	0	0	36	12	12	6
	Yes	2	8	28	8	4	84	2	56	0	40	80	80	0	60	68	34	4	82
Do you respond in English?	No	4	0	40	0	0	40	20	4	24	20	20	44	22	64	32	20	10	
	Some Time	3	2	32	1	6	16	48	24	6	36	0	0	36	18	68	34	16	8
Does your teacher use interactive techniques in teaching English?	Yes	5	6	56	1	2	12	68	34	4	40	2	12	96	24	2	5	40	29
	No	8	8	8	0	80	88	44	4	24	72	72	96	48	32	16	2	76	
Does your teacher promote participatory techniques of teaching in English?	Some Time	3	6	36	8	8	44	22	6	36	20	20	8	28	72	36	28	14	
	Yes	5	2	52	4	4	56	28	0	60	12	12	72	36	2	56	20	8	
Does your teacher use interactive techniques in teaching English?	No	4	4	4	7	72	80	40	8	8	28	28	36	18	12	6	10	50	
	Some Time	4	4	44	2	4	24	68	34	2	32	60	60	92	46	76	38	84	42
Does your teacher promote participatory techniques of teaching in English?	Yes	5	2	52	1	6	16	68	34	3	36	0	0	36	18	88	44	32	8
	No	1	2	12	7	6	76	88	44	2	20	76	76	92	46	32	16	2	76



	Some Time	3	6	36	8	8	44	22	4	44	24	24	68	34	80	40	32	16	
Does your teacher use mother-tongue while teaching English?	Yes	4	0	40	8	0	80	0	60	8	48	64	64	2	56	88	44	4	72
	No	2	4	24	1	2	12	36	18	4	44	12	12	56	28	68	34	24	12
Does your school have English medium environment?	Some Time	3	6	36	8	8	44	22	8	8	24	24	32	16	44	22	32	16	
	Yes	5	2	52	1	2	12	64	32	0	80	4	4	84	42	2	66	16	8
Do you speak English with fellow students?	No	3	6	36	7	6	76	2	56	4	4	80	80	84	42	40	20	6	78
	Some Time	1	2	12	1	2	12	48	12	6	16	16	16	32	16	28	14	28	14
Does your teacher use different A.V aids for the teaching of English?	Yes	3	6	36	2	4	24	60	30	2	32	4	4	36	18	72	34	28	14
	No	2	0	20	6	8	68	88	44	6	16	76	76	92	46	36	18	4	72
	Some Time	4	4	44	8	8	52	26	2	52	20	20	72	36	96	48	28	14	
Does your teacher use different A.V aids for the teaching of English?	Yes	3	6	36	8	8	44	22	2	52	0	0	52	26	88	44	8	4	
	No	1	6	16	7	6	76	93	46	8	8	80	80	88	44	24	12	6	78
	Some Time	4	8	48	1	6	16	64	32	4	40	20	20	60	30	88	44	36	18

## **FINDINGS AND DISCUSSION**

### **From Teacher Questionnaires**

- i. More than Half (55%) of teachers stated that they use English as a medium of instruction. It means our teachers are promoting English in the classrooms. It will benefit to students in their daily life.
- ii. Majority (55%) of teachers stated that English is necessary for the competency in communication. It is fact that without having compulsory status English communications may not improve up to desire benchmark.
- iii. More than half (59%) teachers are of opinion that English is not a better medium of instruction than Gujarati. It is because we are Gujarati native and like our language. It is also easy to communicate information/understandings/knowledge through mother or native language rather than foreign language.
- iv. About (55%) teachers stated that they teach through interactive techniques. It can be seen through observations. If it is true, teacher-student interaction may improve the speaking skills of students but it depends upon teachers own speaking competency also.
- v. About (38%) teachers some time agreed that students respond in English. It shows that student may feel shyness or they are unmotivated towards speaking English in the classroom. Classroom climate also affect students speaking skills. If teachers are using interactive teaching strategies and 38% students respond some times in English then teachers have to pay more attention on students' speaking skills because majority 62% never respond in English.
- vi. About half (45%) teachers disagreed that they promote participatory techniques in English. This result may confirm that teachers are using English as a medium of instruction during teaching English language and 38 % students respond some times in English.
- vii. About (60%) teachers disagreed they use mother tongue while teaching English. It may also confirm that teachers are using Gujarati and English as medium of instruction rather than mother language Gujarati.

- viii. About (43%) teachers agreed that they use other material for the enhancement of the speaking skill of students. It will benefit to themselves and students. Gujarat Education Assessment System PEAS, on the basis of their large scale assessments from 2003 to 2011, reported that performance of teachers is improved by using resources other than textbooks. Consultation with senior teachers/head teachers/teacher educators improves teachers' performance and hence students' performance.
- ix. About (53%) teachers stated that school has an English speaking environment. Education Department, Govt. of Gujarat has nominated schools for English medium classes from KG to metric and in 2013 all public schools will function fully as English medium schools. Therefore teachers have started English as a medium of instruction and as a result English speaking culture is promoting in schools.
- x. About half (50%) teachers stated that they interact with one another in teaching English. It is a good sign for future success.

**A. From Student's Questionnaires**

- i. About (72%) students disagreed that teachers use English as a medium of instruction for the teaching of English. It may be due to that teachers assisted their instruction bilingually. Therefore students have reported that teachers do not use English as a medium of instruction.
- ii. About half (56%) students agreed that English is a better medium of instruction than Gujarati. It is a fact that in English medium classes, English is a more effective medium of instruction than other mediums. Otherwise students have to double translate the contents of a subject to understand it.
- iii. Half (58%) students agreed that teachers speak Gujarati while teaching in English. Again it is because teachers assist their instruction with the national language for effective teaching.
- iv. About (40%) students disagreed that they do not respond in English. It is quite validated by teachers' reports that 38% of students respond sometimes in English.

Teachers and student both have to struggle for cultivating English speaking skills within school.

- v. About (28%) students sometime agreed that teachers use interactive techniques in teaching English. Students may not understand the means of interactive teaching but both teachers and students reported interactive teaching.
- vi. About (76%) students disagreed that teachers promote participatory techniques in English. Both teachers and students reported that participatory techniques are used during class. Participatory techniques are becoming popular in education. Teachers and students both have to struggle for promoting participatory techniques in English speaking skills.
- vii. About (72%) students agreed that teacher use the mother-tongue while teaching English. It is fact that there is diversity in students. All students have no same ability of learning so teacher uses different techniques for their effective teaching. Low ability students require instruction in easy way so they understand different concepts in mother language easily.
- viii. About half (49%) students are disagreed that English medium environment. It may be due to that at present public schools are not fully functioning as English medium.
- ix. About half (45%) students are disagreed that speaking of English with fellow students. It may explore that students are shy in speaking English. Teacher emphasize in cultivating English speaking environment.
- x. About (78%) students are disagreed that teachers use A.V. aids for the teaching of English. It may explore that there is deficiency of A.V. aids in schools for teaching English.

### **Conclusion**

More than half of the teachers use English as a medium of instruction. Students also reported the same. Both teachers and students are using interactive technique for teaching learning process. Teachers as well as students have the view that English is better medium of instruction than Gujarati. Teachers are also using mother language during instruction. Teachers and students are promoting questioning and answering in English. Teachers are using helping material for their effective teaching.

### **Recommendations**

1. Teachers should more emphasize English as a medium of instruction in the English class.
2. Teachers should promote interactive techniques while teaching English.
3. For the enhancement of speaking skill in school environment teacher should cultivate English communication culture within schools.
4. Students may be speaking English with fellow students and encouraged to respond in English.
5. Refresher course for better teachers' training for the creation of English speaking environment within schools should be arranged.
6. Teacher training institution should restricted only for professional courses in English

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