

## Effectiveness Of Video Programme To Plus Two Students

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### Abstract

#### Research Overview

The Role Of Modern Technology Especially Audiovisuals In Education Have Been Emphasized By Scholars Since The Middle Of The Twentieth Century. Since Sensory Experience Forms The Foundation For Intellectual Activity, Sensory Aids Effect An Economy Of Time In Learning.

The Instructional Use Of A Single Inexpensive Video Programme By Classroom Teachers Is Becoming Increasingly Common. The Students Increasingly Seem To Observe It In Proper Perspective And Experiments With This Technique Have Proved To Be A Valuable Adjunct To The Teaching Of Various Subjects. Observed Benefits, In General, Include

- Improved Learning By Students
- Reduced Time For Demonstration
- Economy Of Effort In Preparing Lecture Demonstrations

In This Connection, This Study Is Aimed At Validating The Effectiveness Of Preprogrammed Videotape On Population Education Against The Conventional Teaching Method Of Classroom Lecture. The Curriculum Is Meant For First Year Students Of The Higher Secondary Education.

#### Objectives Of The Study

Objectives Of This Study Are

- i. To Find Out The Effectiveness Of The Video Programme
- ii. To Compare The Achievement Of Good, Fair And Average Achievers After Observing The Topic In The Video Programme

#### Summary Of Analysis

Against The *Pretest*, The Students That Have Undergone The *Lecture Method* Have Shown Improvement To The Extent Of 57%. However, The Average Improvement Of Any Student Because Of The *Video Programme* Is Greater Than The Average Marks They Got In The *Pretest* Itself. The Improvement In Sensitivity Level Is Around 101% With Every Individual Student Achieving Increase In Marks At An Average Of 23.83 Out Of 50. In Short, Marks Gained By Students Due To *Video Programme* Are Significantly Higher Than The *Lecture Method*. Efficacy Of The *Video Programme* On The Students Shall Be Easily Deduced From The Calculations. Remarkably Low Standard Deviation And Range Among The Categories Of The *Video Programme* Reinforce The Fact Further. Number Of Students In The Lower End Is Comparatively Low And Most Of Them Fall In The Upper Quartile Of The Contribution.

#### Findings

1. *Video Programme* Has Evoked The Sensitivity Level Of The Students To An Exalted Position. This Is Due To The Fact That The Media, Which Has Been The Source Of Both Entertainment And Recreation, Is Used To Convey A Practical Lesson About Population. Therefore, The Perception And Attitude Of The Students Towards The Topic Changes From Blind Subordination-Oriented Listening To A More Practical And Interactive Mode Of Acquiring Knowledge. Therefore Their Curiosity Of The Topic Is Enhanced And So Does Their Grasping Power. Secondly, Live Demonstration Of The Topic Creates A State Of Empathy In Them. The Pros And Cons Of Population, When Explained With Live And Graphic Examples Make Them Appraise It Not Only From The Third Person's Perspective But Let Them Put

Themselves In Lieu Of The Characters Depicted Therein. Therefore, The Students Experience The Intensity Of The Topic And This Results In Higher Sensitivity Levels

2. The Improvement Among The Categories Due To *Lecture Method* Is Homogeneous. That Is, All The Three Levels Of Achievers (Good, Fair And Average) Have Shown A Relatively Stable And Equal Proportionate Improvement Because Of The *Lecture Method*. On The Other Hand, The *Video Programme* Method Had Invoked A Response That Is Varying With Respect To The Level Of The Achievers. More Clearly, The Extent Of Improvement Among The Categories Is Not Same Due To The *Video Programme* Method.
3. Finally, Compared To The *Lecture Method*, In The *Video Programme* The Standard Deviation And Range Are Exceptionally Low Both In Overall And Categorical Ratings. Therefore, Qualitatively, The *Video Programme* Reaches The Audiences In A Consistent Manner And Makes Everyone Equally Effective And Productive. The Contribution Of The *Video Programme* Neutralizes The Disparities In The Comprehending Power Of The Students.

## Research Overview & Design

### 1. Introductio

The Role Of Modern Technology Especially Audiovisuals In Education Have Been Emphasized By Scholars Since The Middle Of The Twentieth Century. The Scholars Strongly Suggest The Enhancement Of Pupils In Many Dimensions If The Conventional Teaching Goes In Parallel With Audiovisuals That Were Prepared Prudently To Suit Individual Needs. Therefore, Since Sensory Experience Forms The Foundation For Intellectual Activity, Sensory Aids Effect An Economy Of Time In Learning. Modern Educators Recognize Some Basic Values That Are Vital For Education Such As

- i. Concreteness
- ii. Enrichment
- iii. Dynamic Interest

In Other Words, The Peculiar Advantages Of Modern Visual Aids Such As Videotapes Are

- i. Using Audiovisual Materials, Any Demonstration/Practice/Example That Is Otherwise Inaccessible Could Be Brought To The Class.
- ii. Audiovisual Aids Enables The Teacher To Overcome Some Barriers Of Communication
- iii. Even The Most Abstract Concept Can Now Be Presented To The Pupils In A Concrete Way By Means Of The Audio-Visual Aids
- iv. Use Of Audiovisual Materials Results In Greater Acquisition Of Knowledge And Ensures Longer Retention Of The Information Gained
- v. Audiovisual Materials Enable To Cut Through The Physical Limits Of Time And Space.
- vi. Carefully Prepared Audiovisuals Help To Enhance The Conceptual Knowledge Of The Students And Enables Them To Relate The Abstracts To The Real World

## Educational Technology

Educational Technology Implies A Behavioral Science Approach To Teaching And Learning In That It Makes Use Of Pertinent Scientific And Technological Methods And Concepts Developed In Psychology, Sociology, Communications, Linguistics And Related Fields. It Also Attempts To Incorporate The Management Principles Of Cost Effectiveness And The Efficient Deployment And Use Of Available Resources In Men And Materials. Educational Technology As A Concept Does Not Necessarily Imply The Use Of Machines And Other Items Of Hardware. Experience Has Shown That More Often Than Not They Involve Such Media, Equipment And Resources.

In Short, Educational Technology, In Its Wide Sense As Understood Today Includes The Development, Application And Evaluation Of Systems, Techniques And Aids In The Field Of Learning

### **Multimedia And Instructional Development**

Multimedia Per Se Does Not Affect Total Learning Experience. It Contributes Its Part If Prepared In Accordance With The Need And Learning Objectives. Therefore, It Must Be Used In Combination With Other Instructional Materials To Yield Optimum Results. It Requires Meticulous Planning, And This Process Is Called 'Instructional Development'. Before Going For Video Programme(S), The Following Steps Of The Instructional Development Must Be Executed Successfully To Realize The Full Potential Of The Multimedia

- i. Defining Goals And Desired Terminal Behaviors
- ii. Plan Materials And Strategies
- iii. Teaching Strategies And Method
- iv. Evaluation And Recycling

### **The In-Classroom Video Programme - An Overview**

The Instructional Use Of A Single Inexpensive Video Programme By Classroom Teachers Is Becoming Increasingly Common. The Students Increasingly Seem To Observe It In Proper Perspective And Experiments With This Technique Have Proved To Be A Valuable Adjunct To The Teaching Of Various Subjects Ranging From Biology To Jewelry Making. Observed Benefits, In General, Include

- Improved Learning By Students
- Reduced Time For Demonstration
- Economy Of Effort In Preparing Lecture Demonstrations

Yet, The Extensive Varieties Of Video Programmes, Through Which Classroom Teaching May Be Carried On, Make It Difficult To Prepare A List Of Recommended Teaching Procedures Which Apply Equally Well To All. The Suggestions Pertaining To Video Programme Apply Also To Those With Films, Transparencies And Other Materials With Certain Adaptations Required By The Nature Of The Medium.

### **Preliminary Planning**

When A Video Programme Is Used For Classroom Teaching, Advance Planning Is Necessary. Various Aspects Related To Informational Materials Use, Full Data Programme Schedules And Study Guides Must Be Studied Carefully To Describe Programme Content. Preliminary Preparation Activities Must Be Accompanied By Important Discussion Questions, Related Readings And Suggested Films/Other Audiovisual Aids/Resources. Of Course, An Important Element Of Planning Is To Know The Exact Starting And Ending Of The Programme Itself In Addition To Those Mentioned Earlier.

### **Physical Arrangements And Initial Preparation**

As In The Case Of Films And Other Instructional Materials The Teacher Will Need To Prepare His/Her Students For The Viewing Experience To Help Them To Approach It In A Pleasurable State Of Anticipation With Some Knowledge Of What To Expect From It. The Science Of Ergonomics Also Plays A Role In Contributing To The Efficiency Of The Students. Some Important Aspects Are

- Place Of The Receiver So That All Students Can See It
  - Stagger Chairs For Comfortable Viewing
  - Daylight Or Artificial Light In The Room For Optimum Viewing Conditions But Without Glare On The Receiver Screen
  - Technical Aspects Of Fine-Tuning The Audio/Video
- The Follow Up Activities Must Start Immediately After Viewing So That It Revert To The Preprogram Questions Or Comments

### **Aim Of This Study**

The Study Is Aimed At Validating The Effectiveness Of Preprogrammed Videotape On Population Education Against The Conventional Teaching Method Of Classroom Lecture. The Curriculum Is Meant For First Year Students Of The Higher Secondary Education. The Extent Of

Improvement Video Programme Brings About On Students In Contrast To Traditional Classroom Teaching Must Be Sufficient Enough To Justify The Extra Expenditure Incurred On It. Because, The Same Has Been Prepared With Intense Care, Besides Being Enhanced With Expert Advice. Therefore, Despite Being An Effective Medium Of Educational Communication, The Video Has Its Own Limitations That Are To Be Analysed In Light Of The Results In Order To Conclude Outright On Its Efficacy.

### **Objectives Of The Study**

In Broad, The Objectives Are

- i. To Find Out The Effectiveness Of The Video Programme
- ii. To Compare The Achievement Of Good, Fair And Average Achievers After Observing The Topic In The Video Programme

### **Significance Of The Study**

- iii. The Study Enhances Student Motivation By Increasing Their Perceptual Levels Because Of Their Interest In Video Programme
- iv. The Study Paves Way For Similar Video Programmes To Be Prepared On Various Topics By Adapting The Same Procedure With Necessary Changes
- v. The Study Helps The Teachers To Concentrate On Every Student And Thus Neutralizing The Negative Effects Of Student-Teacher Relationship
- vi. It Enables The Teacher To Find Out Individual Student's Attitude, Skills And Knowledge And The Pace Of Learning Derived Therefrom
- vii. Immediate Feedback And Possible Troubleshooting With Control Measures Guide The Students For Self-Improvement
- viii. The Validity Of Self-Directed Learning In Contrast To The Teacher-Directed Learning Shall Be Explored By Means Of This Study

### **Study Area**

- Students Belonging To The State Board School Alone Are Taken For The Study, Whereas The Matriculation And Cbse School Students Are Not Taken Into Consideration
- The Video Programme Is Prepared In Tamil, Therefore Its Usage Is Restricted To Tamil Medium Students, And Hence The English Medium Students Are Excluded.

### **Sample For The Study**

In The Present Study, The Researcher Selected The Xi Standard Students Of Tamil Medium, Enrolled During The Year 2014-2015 In Holy Cross Girls Higher Secondary School, Tuticorin, Pursing The State Board Syllabus

For This, The Researcher Collected Marks Of The Two Randomly Selected Terminal Examinations Of The Students Of Xi Standard. After Finding The Mean Of These Marks, The Marks Were Arranged In Ascending Order, As Average Achievers, Fair Achievers And Good Achievers. Then The Researcher Took 48 Students, 16 Each From Each Of The Three Achiever Categories. Then They Were Divided Into Two Groups As Experimental Group And Traditional Group. The Experimental Group Was Taught Through The Video Programme Package And Traditional Group Was Taught Through Lecture Method.

### **Statistical Analysis Of The Data**

The Following Statistical Techniques Were Applied To Test The Hypotheses,

- i. One-Way Anova On Hypothetical Scores
- ii. Student's T-Ratio For Samples That Are Not Correlated
- iii. Student's T-Ratio For Small Correlated Samples.

### **Data Analysis**

#### **Analysis With Respect To The Lecture Method**

Against The *Pretest*, The Students That Have Undergone The *Lecture Method* Have Shown Improvement To The Extent Of 57% (Average Increase In Marks Per Student Is 14.58 Out Of 50).

Yet, This Figure Is Quite Different From The Individual Categorical Results. The Improvement Over The *Pretest* Of The Students Is Inversely Proportional To The Level Of The Achievers. That Is, The Higher The Category They Belong To, The Lower Has Been The Improvement Percentage. It Is Convenient To Furnish This In A Tabular Form.

Category	Improvement Over The Pretest (In %)
Overall	57
<i>Good</i> Achievers	31
<i>Fair</i> Achievers	65
<i>Average</i> Achievers	94

From The Table, It Is Clear That The *Average* Achievers Transcend The Other Categories With A Formidable Improvement Percentage. Another Aspect Is The Range Of The Marks In The Three Categories After The *Lecture*. The Range In The *Average*-Achievers Category Is Quite Lower Than That In Other Two Categories. Hence, The *Average* Achievers, Who Lagged Behind In The *Pretest*, Show More Consistency In Both Performance And Improvement. While Testing The Hypotheses Between The Categories Of *Lecture Method*, Their Average Improvement Is Tested For Any Significant Difference That Shall Not Be Attributed To Sampling Errors Or Other Contributing Factors.

For Example, Once The Null Hypothesis Of The *T-Test* For *Good* & *Average* Achievers Is Accepted, It Means That There Is No Significant Difference Between The Marks Of *Good* And *Average* Achievers. Again, This Means That The *Average* Achievers Have Improved To The Level That Is On Par With The *Good* Achievers. More Clearly, To Make Themselves Equivalent To The *Good* Achievers After The *Lecture Method*, The *Average* Achievers Have Obtained Additional Marks That May Offshoot The Deficiency They Had In The *Pretest*. This Holds Good For *Video Programme* Too. In This Perspective, It Is Worthwhile To Furnish The Results In A Brief Convenient Format.

Against Pretest Average Marks Gained Is At Most 13		
<i>Good</i> Vs. <i>Average</i>	Good	Achievers
Show Improvement Than Average Achievers		
<i>Good</i> Vs. <i>Fair</i>	Both The	Categories
Show Equal Improvement		
<i>Fair</i> Vs. <i>Average</i>	Both The	Categories
Have Excelled Equally Well		

From The Results, It Is Learnt That The *Good* Achievers Show Proportionate Increase Of Gain In Marks Due To *Lecture Method* Than The *Average* Achievers. On The Surface, It Seems Meaningless Because The *Average* Achievers Have Gained 17 Marks Due To *Lecture Method* Than The *Pretest* While The *Good* Achievers Have Secured Only 10 Marks. However, On Seeing The *Average* Achievers Dearth Of Marks To The Extent Of 14 Marks In The *Pretest* Against The *Good* Achievers, The Result Of The Hypothesis Test Is Valid And There Does Exist A Proportionate Improvement. The *Average* Achievers Need  $14 + 10 = 24$  Marks To Have The Null Hypothesis Accepted, But They Have Only 17.

Regarding The Test Between The *Good* And *Fair* Achievers, The Null Hypothesis Is Accepted That There Is No Difference Between The Sensitivities Achieved By Both The Categories. It Shows That The Improvement Of The *Fair* Achievers Is Quite Higher Than That Of The *Good* Achievers. The Deficiency On The Part Of The *Fair* Achievers In The *Pretest* Against The *Good* Achievers Is 7 Marks, Which Is Neutralized By The 6.5-Mark Improvement In The *Lecture*. (Improvement Of *Good* Achievers Due To *Lecture Method* Is 10 Marks While The *Average*

Achievers Have Improved To The Extent Of 16.5 Marks. Therefore 16.5 Is Roughly Equal To  $10 + 7 = 17$ ).

A More Contradicting Picture Is Got When Analysing The Differences Between *Fair* And *Average* Achievers. Mark-Gain Because Of *Lecture* Is 16.5 And 17.375 Respectively For *Fair* And *Average* Achievers. *Fair* Achievers Have Outdone The *Average* Achievers With 7-Mark Increase In The *Pretest*. In Addition, They Have Been, Relatively, In Short Of Only 0.875 Marks Than The *Average* Achievers After The *Lecture*. Notwithstanding These Facts, The Hypothesis Result Is Utterly Negative – That Both The Categories Have No Difference In Improvement. Quantitatively One Could Figure Out The  $16.5 + 7 - 17 = 6.5$  Mark Overall Improvement. When One Delves Into The *Standard Deviation* And *Range* Of Both The Categories, There The Answer To This Contradiction Could Be Unravelling. From The Table One Could Find That The Standard Deviation And Range Of The *Fair* Achievers Is More Than *Average* Achievers By 132% And 125% Respectively. Qualitatively, Very Few Of The *Fair* Achievers, Who Have Invaluably Surpassed Their Colleagues Have Contributed To Such A Contradicting Hypothesis Result. In Other Words, Most Of The *Average* Achievers Have Achieved As Much Sensitivity As Majority Of The *Fair* Achievers Did, However, Those Odd Excellent Students Of *Fair* Category Offset The Difference Thereby Giving Way To A Virtual Ambivalence.

Therefore, From The Above Analysis It Is Found That The *Average* Achievers Are The Beneficiaries Of The *Lecture Method* And Have Done Relatively Well. The Overall Rating And The *F-Test* Must However, Support This. Although Two Of The Three Categories Have Shown Improvement Over The *Pretest* (The *Average* And *Fair* Achievers), The *Fair* Achievers Nullify Their Significant Improvement Over The *Good* Achievers Owing To The Higher Standard Deviation And Range Values. Therefore The Intervening Effect Rendered By *Fair* Achievers Causes Significant Differences Among The Three Categories And Therefore Only The *Average* Achievers Seem To Benefit From The *Lecture Method*. The *F-Test* Confirms This By Stating That The *Lecture Method* Has Failed To Effect A Positive Difference Among The Achievers With Respect To Their Categories.

#### Analysis With Respect To The Video Programme

One Could Easily Find The Staggering Welcome To The New Mode Of Teaching On Having A Glance At The Unprocessed Data Itself. The Average Improvement Of Any Student Because Of The *Video Programme* Is Greater Than The Average Marks They Got In The *Pretest* Itself. The Improvement In Sensitivity Level Is Around 101% With Every Individual Student Achieving Increase In Marks At An Average Of 23.83 Out Of 50. As It Was The Case Of *Lecture Method*, Here Too The Improvement Over The *Pretest* Is Inversely Proportional To The Level Of The Achievers. However, The Magnitude Of That Inverse Relation Is Too High To Parallel It With The *Lecture Method*.

Category	Improvement Over The Pretest (In %)
Overall	101
High Achievers	59
Fair Achievers	103
Average Achievers	179

On Seeing The Table, One Might Perceive That The *Average* Achievers Have Had Much More Grasping Power Than The *Good* Or *Fair* Achievers. Conversely, Individual Marks Do Not Support This Standpoint. That Is, About 75% Of The *Good* Achievers Of The *Video Programme* Have Attained The Zenith. Therefore, If Their *Pretest* Scores Are To Be Bridged With A Minimal Percent Of Marks To Attain The Maximum, Then This Percentage Could Not Be Considered Minimal. More Clearly, The Marks Required By The *Good* Achievers To Attain Maximum Is Sufficient Enough To Rationalize The Relatively Lesser Improvement Percent. Therefore, It Need Not Be Perceived Insignificant. Had There Been A Large Gap Between The *Pretest* Scores And The Marks Of The *Video Programme* Of The *Good* Achievers - Which Signifies The Sensitivity Level In Contrast To The Other Two Categories - The Results Would Have Been Much More Surpassing.

Because, The Difference Among The Achievers In *Pretest* Plays An Important Role In Contributing To The Individual, Categorical And Overall Results. A Category-Wise Analysis Is Effected For Getting A More Detailed Picture Of The Efficacy Of The *Video Programme*.

Against <i>Pretest</i> Average Marks Gained Due To Video Programme Is At Most 22			
<i>Good Vs. Average</i>	Good	Achievers	Show Improvement Than Average Achievers
<i>Good Vs. Fair</i>	Good	Achievers	Show Improvement Than Fair Achievers
<i>Fair Vs. Average</i>	Both	The Categories	Have Excelled Equally Well

Hypothesis	Variance	Std. Deviation	Std. Error	T Value	Degrees Of Freedom	Upper Limit	Difference In Means	
Null Hypothesis $H_0$ : $M_1 = M_2$ (Both <i>Video Programme</i> And <i>Lecture Method</i> Are Same In Effectiveness)	119.48	10.931	3.1555	1.680	46	5.3012	15	Reject Null Hypothesis. It Is Not Significant At 0.05 Level.
Alternative Hypothesis $H_1$ : $M_1 > M_2$ ( <i>Video Programme</i> Is More Effective And The Expenditure On It Is Justified)								

In The Categorical Comparison Of *Good* And *Average* Achievers The Null Hypothesis Is Rejected And Concluded That The *Good* Achievers Have Shown Proportionate Improvement Over The *Average* Achievers. *Average* Achievers Have Gained 12 Marks More Than The *Good* Achievers (Gain For *Good* And *Average* Achievers Are 18 And 30 Respectively) And This Surplus Is Subdued By The 15-Mark Deficiency In The *Pretest*. In The *Good-Fair* Comparison Too, This Thing Happens. Further, In The *Fair-Average* Case The Situation Is Different. The Null Hypothesis Is Accepted, Thus Equalising Both The Categories. Therefore, Having *Pretest* As The Controlling Factor, One Could Find That The Degree Of Improvement Shown By The *Average* Achievers Is Higher Than That Of The *Fair* Achievers. Finally, The Overall Situation Is Depicted In The Table Below, And Therefrom One May Conclude That The Proportionate Improvement Is Better In The Case Of *Good* And *Average* Achievers.

Excluding The *Fair* Achievers, The Remaining Two Categories Have Shown Considerable Positive Difference Against The *Pretest*. In The Case Of *Fair* Achievers, However, The Standard Deviation And Range Is Comparatively Higher, Which Justifies The Eclipse Of Them By The *Average* Achievers. Therefore, When All These Are Put Together, And Compared To The *F Test*, One Shall Find That The *Video Programme* Has Effected Difference Among The Achievers That Shall Certainly Not Be Attributed To The Sampling Error. The Significance In Difference Within The Categories Is Realized In The *Video Programme*, For The *Good* And *Average* Achievers Being The Beneficiaries Of The *Video Programme*.

## Comparative Study Of The Lecture Method And The Video Programme

### Calculations

#### 1. Preliminary Data

<i>Video Programme</i>	<i>Lecture Method</i>
No. Of Samples = 24	No. Of Samples = 24
Mean Sensitivity = 47.4167 (94.83%)	Mean Sensitivity = 39.9167 (79.83%)
Std. Deviation = 2.0412 (4.08%)	Std. Deviation = 5.9265 (11.85%)

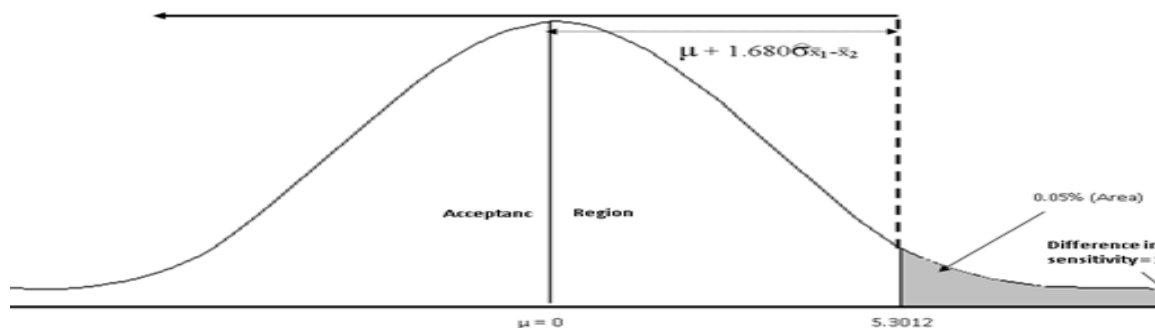
#### 2. Hypothesis Testing

#### 3. Result

Since The Difference In Sensitivity Level Between The Programmes Is 15 (I.E. 94.83-79.83) And Is Lying Far Outside The Acceptance Region (The Upper Limit Is 5.3012), The Null Hypothesis

### Video Vs. Lecture – Overall Comparison

Of Both The Programmes Being Equal Is Rejected. It Is Concluded That The Video Method Is More Effective And The Extra Expenditure On It Shall Be Justified. The Graph Has Been Presented In The Next Page.



### Analysis

Although The Marks Gained Due To *Video Programme* Is Significantly Higher Than That Due To The *Lecture Method*, It Is Important To Analyse The Categorical Difference Or Similarity Before Concluding Outright That The *Video Programme* Is Much More Effective. The Cost Factor Involved In It Must Be Justified. In Order To Justify It, The Extent Of Improvement Should Also

Exceed A Certain Limit, Which Shall Be Determined By Studying And Analysing The Dependent Factors Therein.



<i>Overall Comparison</i>	Video Programme Is More Effective
<i>Average Achievers</i>	Students Of Video Have Shown Improvement Than Those Of Lecture
<i>Fair Achievers</i>	Students Of Both The Programmes Show Equal Improvement
<i>Good Achievers</i>	Students Of Video Have Shown Improvement Than Those Of Lecture

From The Summary Table, The Efficacy Of The *Video Programme* On The Students Shall Be Easily Deduced. Remarkably Low Standard Deviation And Range Among The Categories Of The *Video Programme* Reinforce The Fact Further. However, On Seeing The Table, One Could Notice A Paradoxical Aspect Regarding The Comparison Between The *Fair* Achievers Of Both The Programmes. Despite Having A Relatively High 5-Mark (About 10%) Difference And Enjoying Better Standard Deviation And Range Factors, The *Fair* Achievers Of The *Video Programme* Are Deemed Equal To Those Of The *Lecture Method*. The Only Reason Shall Be The Proportional Contribution Of Individual Students To The Category. That Is, Within The Sample (I.E. The *Fair* Achievers), An Individual Student's Contribution Percentage Must Be Consistent With The Overall Group Contribution Percentage. In The *Video Programme*, As From The Standard Deviation And Range, It Is Discernible That Individual Contribution Percent Is More Or Less Equal. However In The Case Of The *Lecture Method*, The Situation Is Quite Different. Within That Sample, About 40% Of The Students Contribute Only 29% Of The Marks To That Category. In Other Words, The Remaining 60% Have Contributed About 71% Of The Marks. Therefore Number Of Students In The Lower End Are Comparatively Low And Most Of Them Fall In The Upper Quartile Of The Contribution. Therefore, A Logical Equivalence Shall Be Deduced Between The 70% Of Students Of The *Lecture Method* And The *Fair* Category Students Of *Video Programme*. Further, Higher Standard Deviation Of *Lecture Method* Might Have Caused A Better Upper Limit For The Hypothesis, Thus Paving Way For The Null Hypothesis To Be Accepted.

## Findings & Suggestions

### Findings

1. *Video Programme* Has Evoked The Sensitivity Level Of The Students To An Exalted Position. The Possible Reasons Shall Be
  - The Media, Which Has Been The Source Of Both Entertainment And Recreation Since Its Introduction To The Public Addressing System, Is Used To Convey A Practical Lesson About Population. Therefore, The Perception And Attitude Of The Students Towards The Topic Changes From Blind Subordination-Oriented Listening To A More Practical And Interactive Mode Of Acquiring Knowledge. Therefore Their Curiosity Of The Topic Is Enhanced And So Does Their Grasping Power.
  - As A New Medium Of Education, The *Video Programme* Could Have Stimulated A Relatively Temporary Attentiveness Within The Students
  - Live Demonstration Of The Topic, The Population Education, Virtually Creates A State Of Empathy In Them. The Pros And Cons Of Population, When Explained With Live And Graphic Examples Make Them Appraise It Not Only From The Third Person's Perspective But Let Them Put Themselves In Lieu Of The Characters Depicted Therein. Therefore, When Got Engrossed In The Subject Matter, The Students Experience The Intensity Of The Topic And This Changed Attitude And Knowledge Results In Higher Sensitivity Levels
  - The Perceptual Input Of This Live Visual Media Is Much More Exhortative And This Affects The Retaining Capacity Of The Students.

2. The Improvement Among The Categories Due To *Lecture Method* Is Homogeneous. That Is, All The Three Levels Of Achievers Have Shown A Relatively Stable And Equal Proportionate Improvement Because Of The *Lecture Method*. On The Other Hand, The *Video Programme* Method Had Invoked A Response That Is Varying With Respect To The Level Of The Achievers. More Clearly, The Extent Of Improvement Among The Categories Is Not Same Due To The *Video Programme* Method. The Possible Reasons Shall Be
  - The Knowledge Level Of The Student Is Affected By Various Factors. Their Intelligence, Their Attitude Towards The Teaching, Their Perceived Position Or Rank In The Class In Contrast To Other Students, The Situation, And So On. Therefore The *Lecture Method*, Which Is Conventional, Shall Have Forced Them Apprehend The *Lecture* On Population Education As A Mere Imitation Of The Regular Classes. Therefore, The Typical Gap Between The Better Students And The Average Ones Has Extended Here Too.
  - Students Who Always Have Got Used To The *Lecture Method* Of Acquiring Knowledge May Not Have Realized The Importance Of The Education And Hence May Have Followed Their Traditional Method Of Responding To The Tests.
  - In The *Lecture Method*, Both *Fair* And *Average* Achievers Have Shown Distinctive Improvement Than *Good* Achievers. However, *Average* Achievers Seem To Have Utilized The Merits Of The *Video Programme* More Profoundly Than Those Of The Other Categories Did. This Reminds The General Truth About Intelligence That Responding To Questions Correctly Itself Does Not Validate The Efficacy Of Either The Training Or The Student. The Students Must Be Given An Opportunity To Learn In The Way They Want To Do It. Therefore, In The *Video Programme* The Extent Of Learning Seems To Be Higher In The *Average* Achievers.
3. Finally, Compared To The *Lecture Method*, In The *Video Programme* The Standard Deviation And Range Are Exceptionally Low Both In Overall And Categorical Ratings. Therefore, Qualitatively, The *Video Programme* Reaches The Audiences In A Consistent Manner And Makes Everyone Equally Effective And Productive. The Contribution Of The *Video Programme* Neutralizes The Disparities In The Comprehending Power Of The Students.

### Suggestions

1. Although It Seems Effective, The Efficacy Of The *Video Programme* Shall Be Ephemeral. Once The Students Are Accustomed To This Mode Of Teaching Then There Is A Chance For This Entertainment Medium To Lose Its Ability To Entice The Students. The Efficacy, In The Long Run, Of The *Video Programme* Is Determined By The Following Factors
  - Careful Preparation Of The Curriculum With Respect To The Technical Aspects
  - Coordination Between The Subject Expert And The Media Controller
  - Good Communication And Technical Skills Of The Team
2. The *Video Programme* Itself Could Not Be Taken As Sufficient Or Complementary Against The Conventional Method Of Teaching. Live Explanations And Clarifications Must Augment This, Which Is Effected By The Teacher Himself/Herself. Student-Teacher Interaction Is A Must Especially For Basic Level Of Education. The Extra Cost Involved In It Must Be Justifiable With Respect To The Below Mentioned Factors
  - Extent Of Need For The Education In That Subject
  - The Level And Grade Of The Audience I.E. The Students
  - Nature Of Preparation
  - Attitude, Skills And Knowledge Of The Students
  - Student-Teacher Interaction Level
3. The Really Effective Use Of Media Comes Down To A Question Of Balance Between The Teacher's Work And Media Usage. Teachers Should Not Adopt The View 'Let The Video Programme Do It'. Hence, Without Teacher's Planning, Supervision And Follow-Up The Teaching And Curriculum Will Result In Waste Of Money And Time.