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Copyright Policy

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EDITORIAL

"Certainty is the most vivid condition of ignorance and the most necessary condition for knowledge"

Research enquiry is full of challenges and uncertainties. The certainties of one age are the research problems of the next. As McKenzie (1997} points out, 'research is embedded in a churning vortex of constructive and destructive tensions in which old educational 'certainties' are replaced by new 'certainties' (1997: 9). What is the relation between epistemology and ontology are the key questions of the researchers.

Knowledge or epistemology is a treasure, but practice is the key to it. Educational researchers bring a wide range of theoretical perspectives to their work through their scientific research. Ontology and epistemology affects the methodology that underpins researchers work. Significantly methodology provides a rationale for the ways in which researchers conduct research activities. Epistemology is central to research endeavour. Epistemological and methodological concerns are implicated at every stage of the research process. The relation between epistemology and ontology is always questioned among researchers. Research can be established through the publication of findings in the journals of repute. Research should be future oriented and designed to benefit the stakeholders relatively than the researchers themselves.

This volume does contain a few research articles by teacher educators and research scholars which speak about epistemological contributions to research. Dr. Sarah Manickaraj and K. Magaveera Nagappa made a research on leveraging the perception of organisational climate and interpersonal relations and found that Life Skills Training Programme and Workplace Counselling will be effective to increase the perception of organizational climate and improve the Interpersonal Relations of the Junior Level managers and Middle level managers. Sony Francis C in her study on style of learning and thinking of graduate students in Kerala found that students to be independent lifelong learners, more integrated learning and thinking, with better processing skills on both brain hemisphere is essential. Dr. Smt. S.

Malathi, and Smt.K.Usha,studied that there is significant effect of Concept Attainment Model over traditional method of teaching to higher secondary school students on Economics teaching. The linkage of official language and medium of instruction in work efficiency of government employees - a study" by K. L. Preetha showed that mother tongue as well as English can be used as administrative language for increasing work efficiency in Government departments. A study on the influence of health status of students on academic achievement by Beaulah Jayarani and Raphael Edward highlights that Health risks affect the academy of each student in middle, high &higher secondary school. Dr. F. L. Antony Gracious, F.L. Jasmine Anne Shyla made a study on Multi Techno Pedagogy for Mixed Ability Learner. Apart from the eight types of intelligence by Howard Gardner, a new theory of intelligence namely existential intelligence also exists in the field of education and claims that technology collaborated multiple intelligence will rock out the future education.

We express our sincere gratitude to contributors and we look forward to articles on philosophy of education, learning theory, technology and research on current issues. Quality articles based on reflections and reading will also be considered for publication.

Dr. A. Alma Juliet Pamela

Associate Editor.

Research Article

Leveraging the Perception of Organisational Climate and Interpersonal Relations of Junior Level and Middle Level Managers

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ABSTRACT

The purpose of the study is to leverage the perception of Organisational climate and interpersonal relations of Junior Level Managers and Middle Level Managers.A sample of30 Junior Level Managers and 30 Middle level managers were matched on their age, sex, educational status, years of experience ,Marital status, socio economic Status and geographical Location. The tools chosen were (i) Organisational climate Questionnaire by Shailendra Singh (1989) and (ii) FIRO-B scale by Wi11 Schutz (1982).The results obtained indicated that there were no differences in the perception of Organisational Climate and Interpersonal relations and also the results shows that the Life Skills Training programme and workplace counselling increase the perception of Organisational Climate and improve Interpersom1al relation of Junior Level Managers and Middle level Managers.

Keywords: Organisational Climate, Interpersonal Relations, Junior Level Managers, Middle Level Managers, FIRO-B

INTRODUCTION

Organisational climate represents the entire social system of a work - group. It is clearly a system concept. There are two important aspects of climate(l)workplace itself and (2)Personal treatment of management. If employees feel satisfied while at work and if climate provides a sense of personal worth, it can be assumed that organisation is favourable. Employees expect the management to feel and care about their needs and problems.

Organisations are always unique. Each has its own culture , traditions and methods of action which in their totality constitute its climate for the people who work in the organisation. By climate, we mean those characteristics that distinguish the organisation from other organisations and that in?fluences the behaviour of the people in the organisation. Some organisations are bustling and efficient, others are easy going. An organisation tends to attract people who bite its climate so that its patterns are to extend perpetuated.

Positive climate encourages, while negative climates inhibits discretionary eff01t 'organisational effort' refers to the quality of working environment. If people feel that they an valued and respected within the organisation, they are more likely to contribute positively to tht achievements of the buisness outcome. Creating a healthy organisational climate requires attentior to the factors which influence employee's perceptions, including equality ofleadership, the way ir which the decisions are made and whether the efforts of employees are recognised.

"climate for an organisation is somewhat like the personality for a person" just as evef) individual a personality that makes each person unique, each organisation as an organisational climate that clearly distinguishes its personality from other organisation. Every organisation in different and has an unique feeling and character beyond its structural characteristics. Thus ever) organisation deals with its member in a distinct way through its policies on allocations of resources, communication pattern, reward and penalty and decision making style etc... The organisational policy and conviction with regard to all these and a cluster of other related activities influence the feelings, attitudes and behaviour of its members and results in the creation of the unique organisational climate.

Interpersonal relations at work (and away, too)serve a critical role in the development and maintenance of trust and positive feelings in a farm organisation. An effective manager needs to abstain from showing favouritism: make difficult, sometimes unpopular, decisions and avoid misusing the managing power .In fulfilling responsibilities, managers need to strike the right note in thei1 interpersonal relations with workers. New managers ,especially those who have moved up through the ranks ,are often counselled to keep a healthy distance from workers. Managers must be approachable and friendly, yet fair and firm.

The negative aspects of poor interpersonal relations include, among others, the following as

1) The morale of the employees becomes low.(disagreement among the employees over certain work proposals affects the morale)This affects their attitude towards work.2)The productivity gets affected :When employees have low morale, their level of performance will also be low. This affects productivity.3)The team work and cooperation may deteriorate: In view of disagreement the employees are not able to work with proper understanding and co operation.4)There is decline in the level of efficiency: As the employees are thinking about the disputes among each other all the time, they may not be able to concentrate in their work.5)When not resolved conflicts may tum into disputes: Conflicts are a regular feature of an organization. But a conflict has to be resolved within a time frame. If it is allowed to remain without a solution for long, it may certainly turn in to a dispute and requires the help of a mediator.

Interpersonal Relations establish and foster sound relationship between workers and management by safeguarding their interests. Interpersonal Relations avoid industrial conflict and strikes by developing mutuality among the interests of concerned parties. Interpersonal Relations provide an opportunity to the workers to participate in management and decision making process. Interpersonal Relations increase productivity in organization, and curb the employee turnover and absenteeism. Interpersonal Relations establish and promote industrial democracy based on labour partnership in the sharing of profits and of managerial decisions.

Several problems lead to affect the perception of Organizational Climate and Interpersonal Relations. Some of them are the conflicts, lack of social skills, lack cooperation and barrier in communication which affect the life skills and thus lead to poor cooperation of Organizational Climate and poor Interpersonal Relations. The importance of Like Skills Training and Workplace Counselling is very much essential to overcome conflicts, lack of social skills, lack of cooperation, barrier in communication and to create an efficient perception of Organizational Climate and excellent Interpersonal Relations.

The present investigation was carried out to find whether there is any significant difference in the perception of Organizational Climate and Interpersonal Relations with regard to the demographic variables such as Age, Sex, Educational status, Years of Experience, Martial Status, Socio Economic Status and Geographical Location and also to find whether the Life Skills Training programme and Workplace Counselling increase the perception of

Organizational Climate and improve Interpersonal Relations of Junior Level and Middle Level Managers.

Hypotheses

- There will be no significant difference in the perception of Organizational Climate and Interpersonal Relations among Junior Level Managers and Middle Level Managers after the Life Skills Training Programme and Workplace Counselling.

Sample

A sample of 30 Junior Level Managers and Middle Level Managers, were further classified based on their demographic variables belonging to the Age group of 25-30 for Junior Level Managers and 36-40 and 41-45 for Middle Level Managers, Gender- both Men and Women, Educational Status- only Undergraduates and Postgraduates, Years of Experience -0-2 and3-5 for Junior Level Managers and 6-7 and 8-10 for Middle Level Managers, Marital status both Unmarried and Married, Socio Economic Status - only Low Income group and Middle Income group and Geographical Location - both Rural and Urban with regard to poor perception of Organizational Climate and Interpersonal Relations were included in the present study.

Procedure

The Investigator met the Managers in person and interviewed them regarding their wor1 environment, :flexibility, responsibility, standards, rewards, clarity, team commitment, conflicts. communication, morale and cooperation in the organization. Two questionnaires were used tc measure the perception of Organizational Climate and Interpersonal Relations of the Managers.

Tools

A Personal Data Sheet developed by the Investigator was used to collect personal information. The Organizational Climate questionnaire developed by Shai1endra Singh (1989). has 31 items or statements and these items or statements are organized under different dimensions at professional help, formalization professional management, organizational risk

taking, standardization, people organization, centralization, formalized communication, welfare concern. Each statement is to be rated on a 5 point scale as, Means true to a almost no extent, Means true to a small extent, Means true to a some extent, Means true to a great extent and Means true to a very grea1 extent. The items of the scale are framed in such a way that they can study Organizational Climate perceived by the subjects (employees), and the FIRO-B scale by Will Schutz (1982), Constructing of three in behavior Expressed (E) or shown to others and three in behavior wanted (W) or preferred from others. The three different areas of interpersonal behavior assessed in PIRO - B are Inclusi011 (I), Controls (C), and Affection (A). The six scores, then, that emerge from this instmment, are Expressed Inclusion (EI), Wanted Inclusion, Expressed Control (EC), Wanted Control (WC} Expressed Affection (EA), and Wanted Affection (WA). The reliability co-efficient of this inventory was found to be 0.77 and suggests a high degree of concurrent validity.

Statistical Analysis

In order to analyze the data collected on the basis of sampling, the following statistical techniques were used.

- Mean
- Standard Deviation
- Student 't' test.

The 't' Values for the perception of organizational Climate of Junior Level Managers and Middle Level Managers before and after the Life Skills Training and Workplace Counselling.

Groups	Life Skills Training and Workplace Counselling	N	Mean	Standard Deviation	**t' values**
Junior Level Managers	Before	30	63.2	10.9	13.87**
	After	30	96.5	7.34	
Middle Level Managers	Before	30	71.9	8.78	115.40**
	After	30	102.3	6.32	

** Significant at 0.01 level

The 't' Values for the perception of Interpersonal Relations of Junior Level Managers and : Middle Level Managers before and after the Life Skills Training and Workplace Counselling

Groups	Life Skills Training and Workplace Counselling	N	Mean	Standard Deviation	't' values
Junior Level Managers	Before	30	13.9	2.1	4.80**
	After	30	16.4	1.93	
Middle Level Managers	Before	30	19.2	2.99	8.36**
	After	30	24.32	1.49	

** Significant at 0.01 level

Discussion

From the above findings there is no significant difference in the Junior Level managers, Middle level managers between the age group, educational status, Years of Expe1ience marital status, economic status and geographical location in the perception of organizational climate and Interpersonal Relation. The physical factors, the psychological factors and the social factors did not affect the perception of organizational climate and Interpersonal Relation.

It is seen that the Life Skills Training Programme and Workplace Counselling was effective to increase the perception of organizational climate and improve the Interpersonal Relations of the Junior Level managers and Middle level managers. The Life Skills Training Programme and Workplace Counselling helps to overcome the problems such as not able to coordinate the simultaneous actions of different parts of the body, not able to maintain equilibrium despite forces pulling off balance, lack of ability to continue maximum effort requiring prolonged effort overtime and success in fulfilling their fundamental needs. It also helps to improve motivation, reduce job satisfaction, resolve the conflicts, improve cooperation, flexible to innovate, improve appreciation and recognition, concern for employee well being. It advances communication, morale, training and development, environmental conditions. It also helps to improve eye contact, appropriate bodylanguage and presence of humour, warmth and affection. It also helps to overcome the feelings of insecurity or economic stability and way for good phase of communication, job satisfaction, conflicts resolution and improve the conversational skills. It influences the sensitivity towards others, a desire to establish relations as well as feeling satisfied with relationships work environment, improve

social interaction. So the Life Skills Training Programme and Workplace Counselling is useful and effective to increase the perception of organizational Climate and improve Interpersonal Relations Junior Level managers and Middle level managers.

CONCLUSIONS:

The following conclusions were drawn from the present investigation

There is no significant difference in the perception of Organizational Climate anc Interpersonal Relations of Junior Level managers and Middle level managers with regard to th, demographic variables.

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Research Article

Style of Learning and Thinking of Graduate Students in Kerala

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ABSTRACT

Styles depend on the cerebral dominance of an individual in retaining and processing information. The present study focuses on the learning and thinking of graduate students. Students have different learning style but the persons who utilize whole brain are more successful.

Keywords: Learning Style, Thinking Style, Graduate Students, Kerala, Cognitive Style, Educational Psychology, Higher Education

INTRODUCTION

Everyone perceives the world through five senses, but differently. Just like finger-prints everyone has his or her own unique style oflearning and thinking. In accomplishing various tasks, each individual had particular preferred learning style. Styles depend on the cerebral dominance of an individual in retaining and processing different modes of information in his own style of leaming and thinking. It is one of the reasons why the same problem is perceived and solved by different individuals in different ways. Both groups learn equally well but for functioning effectively in any professional area require working well in all learning style modes. Therefore objective of education should be to help students to build their skills in both preferred and less preferred modes of leaming.

STYLE OF LEARNING

Leaming style_ indicates individual's highlighted and relatively consistent behaviour patterns. Therefore it is closely related with individuality. It is the tendency of the learners to adopt a particular set of strategies consistently. Leaming styles are formed through the following manner:

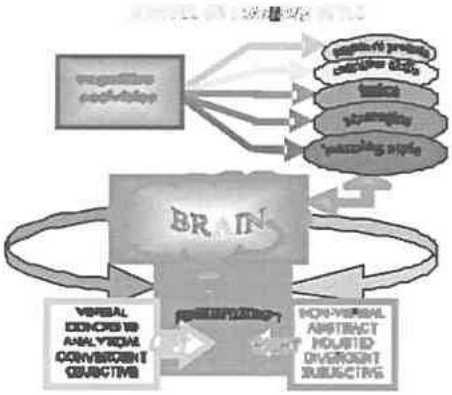
Step-I Cognitive process: It is the basic cognitive activities taking place in the memory.

Step-II Cognitive skills: They are cognitive processes described in terms of ability of individual's consistency to carry out certain type of tasks.

Step-III Tactics: They are skills brought into play in order to solve particular problems.

Step-IV Strategies: They are organized series of tactics.

Step-V Learning styles: They are similar set of strategies used consistently across different tasks. This connection of brain and learning style is represented through the following diagram.



NEED AND IMPORTANCE

Graduate course is considered as one of the important stepping-stone in the educatior period. It is after the completion of graduate course, most of the students enter into the professional field they prefer. Therefore learning and thinking of graduate students at these periods are of grea1 significance. A study of learning and thinking of graduate students will be of great benefit to instructors, students and parents.

BENEFITS TO THE STUDENT

Collaboration and the ability to work effectively in a team environment is continually reported as one of the top attributes employers are looking for in college graduate. The key tc collaboration is effective communication and the key to effective communication is to

understand both our colleague and us. A student who learns and appreciate all styles will more easily adapt to new challenges in college, at work and in his/ her personal relationship.

BENEFITS TO THE INSTRUCTOR

Robert J. Sternberg says, "Many students that I had thought to be dumb were not stupid at all, but rather simply did not learn in a way that was compatible with the way I was teaching. But my teaching material is just a single way had never even given them a chance".

A teacher who possess an understanding of his/her students prefen-ed learning styles can present lessons in a variety of ways and offer each student the opportunity to find the mode that works best for him or her.

BENEFITS TO THE PARENTS

Styles like abilities are not always inborn. They are in large part developed due to environmental condition and by way of nurturing children by their parents. Styles are not fixed, but changeable. Fixing and changing of particular style is possible by changing the existing environment, in which parents had great role. It also helps parents to know the child's learning style and give scaffold in accordance to it.

STATEMENT OF THE PROBLEM

The problem is stated as "Style of learning and thinking of graduate students in Kerala".

OBJECTIVES OF THE STUDY

- To measure the difference between Right hemisphere style of learning and thinking of male graduate students and left hemisphere style of learning and thinking of male graduate students
- To measure the difference between Right hemisphere style of learning and thinking of female graduate students and left hemisphere style of leaming and thinking of female graduate students.
- To find out the difference between style of learning and thinking of professional graduate students and style of learning and thinking of non-professional graduate students.

HYPOTHESES

- There is no significant difference between Right hemisphere styles of learning and thinking of male graduate students and left hemisphere style of learning and thinking of male graduate students.
- There is no significant difference between Right hemisphere styles of learning and thinking of female graduate students and left hemisphere style of learning and thinking off female graduate students.
- There is no significant difference between style of learning and thinking of professional graduate students and style of learning and thinking of non-professional graduate students.

METHOD OF STUDY

In the present study 'survey method' was adopted to accomplish the objectives. SOLAT tool developed by Dr. Venkataraman (1994) was used to measure the hemisphere preferences for information processing. It consisted of 100 items based upon accumulated research findings concerning the specialized functions of the left and right hemispheres.

SAMPLE OF THE STUDY

A total of 300 students from various professional and non-professional colleges were selected for the study. In the Professional group the investigator selected B.Ed., Engineering, Nursing, B.B.A and Law and in the non-professional group Economics, Zoology, Computer science, Maths, and B.com students. The investigator randomly selected 30 students from each group of which half were boys and remaining were girls. The study was conducted in various professional and non-professional colleges at Thrissur, Palaghat and Kozhikode districts.

DATA ANALYSIS AND INTERPRETATION

Table 1

The 't' value between right hemisphere learning and thinking styles of male/female graduate students and left hemisphere learning and thinking styles of male / female graduate students

Style of learning and thinking	't' value	Significance(0.01)level
Right hemisphere learning and thinking and left hemisphere learning and thinking of males	4.88	significant
Right hemisphere learning and thinking and left hemisphere learning and thinking of female	7.81	significant

Table 2

The 't' value between learning and thinking styles of professional and Non-Professional graduate students

Style of learning and style of thinking	't' value	Significance(0.051)level
Style of learning and style of thinking of professional and non professional students	0.315	Not significant

FINDINGS OF THE STUDY

- There is marked difference between the Right hemisphere Learning and Thinking style of Females and Left hemisphere learning and thinking style of Female Graduates (t=7.81) evenat0.01 level.
- There is marked difference between the Right hemisphere Leaming and Thinking style of Males and Left hemisphere learning and thinking style of Male Graduates (t=4.88) even at 0.0I level.
- There is no significant difference between the Leaming and Thinking style of Professionals and Non-professional Graduate students (t =0.315) even at 0.0 I levels.

EDUCATIONAL IMPLICATIONS

No research effort can be said to be worthwhile if it does not provide some educational implications. The findings of the study have certain important educational implications.

The right and left hemispheres have their own peculiarities and significance. But for an individual to function better, an integrated function of both the hemispheres is necessary. Different teaching techniques and methodologies can be adopted to activate and influence the hemisphere functions of brain. The teaching techniques in the schools\colleges must be under taken in consonance with the student's style of learning and thinking. This approach will remove unnecessary restrictions on teaching and learning of the students and actualization of the concept "no limits to learning". The teaching and learning procedures must be organized in such a way that they tone up and activate the hemisphere functions of the brain in students.

CONCLUSION

The findings of the present study give a clear picture of how the brain hemisphere dominance influences the style of learning and thinking among graduate level students. It is seen that the two sides of the brain performs different functions. Those differences in brain functions are what causes, individual learning and thinking styles among people. In no way one brain hemisphere is superior over the other. Understanding styles of learning and thinking can help people prevent their misunderstanding and actuaJly come out with a better knowing of each other and themselves. Teaching and Learning process must be organized in such a way that they toned up and activated the hemisphere functions of students. We can help students to become more integrated learners and thinkers with better processing skills on both hemisphere, by working with the hemisphere preference of learners as well as providing opportunity for actuating the functions of the non-dominant hemisphere. This will make the students as independent lifelong learners.

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Research Article

Effectiveness of Teaching Economics through Concept Attainment Model over Traditional Method of Teaching to Higher Secondary School Students

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ABSTRACT

The main objective of the study was to find out if there is any effect of Concept Attainment Model on Economics teaching. The experimental method was adopted for the present study. A sample of 100 students from Chinmaya Vidyalaya Higher Secondary School, Virngambakkam, Chennai-92 was selected on the basis of purpose sampling method. The investigator administered entry behavior test to the sample for the selection of experimental and control group. The investigator conducted pre-test and post-test for experimental and control group. Mean, S.D and t' test was used for analyzing the data. The major: finding was that there is significant effect of Concept Attainment Model on Economics teaching.

Keywords: Concept Attainment Model, Economics Teaching, Traditional Method, Higher Secondary Students, Teaching Effectiveness, Instructional Strategies, Academic Achievement

INTRODUCTION

Concept Attainment Model was originally designed by Joyce and Weil (1972) and is based on the research efforts of Jerome Brnner, et al. (1956). The Concept Attainment Model is an inductive model designed to teach concepts. Although it is similar to the general inductive model in the type of reasoning used, it is specifically designed to teach only one form of content, concepts. Concept learning is a naturally occurring process in people of all ages which

involves seeing similarities in objectives in world, forming categories on the basis of the similarities and abstracting from the categories

The educational objectives of the Concept Attainment Model are:

- To acquire a new concept.
- To enrich and clarify known concepts.
- To develop an awareness of thinking strategies.
- To understand the nature of conceptual activity.

The investigator being a teacher of Economics in Chinmaya Vidyalaya Higher Secondary School, Chennai - 92, she finds out that most of the students are unable to understand and retain the dates and events in the proper places. The traditi9nal method helps the students to understand the dates, events, facts and concepts only for a sh01t period. It does not help the student to retain perpetually. The traditional method encourages only memorizing instead of proper understanding of the subject. So the traditional method is not suitable and appropriate to teach Economics. Hence the investigator made up her mind to select the Bruner's Concept Attainment Model for teaching Economics for the present study.

OBJECTIVES OF THE STUDY

- To find out the difference between the means of pre-test score for the experimental and control group.
- To find out the difference between means of the post test score between the experimental and control group.
- To find out the difference between the means of the pre test and post-test scores of the experimental group.
- To find out the difference between the means of the pre test and post-test scores of the control group.

SAMPLE

For the experimental study, the investigator selected hundred students of Higher Secondary studying in Chinmaya Vidya]aya Higher Secondary School, Chennai - 600 092. For the purpose of experiment only one school was chosen. The selection of the school was made on the basis of purpose sampling method.

TOOLS

1. Entry behavior test: This test was used to evaluate student's mastery in Economics at high school Level. The test contained 60 objective type items based on previous knowledge about 40 economic concepts. On the basis of scoring, Experimental and Control groups were selected by equal matching pairs.
2. Pre-test / Post-test: The researcher conducted pre-test before the treatment and post-test after teaching Concept Attainment Model.
3. Reaction scale: This was administered only to experimental group at the end of the treatment. The scale consists of 10 items with 5 point scale.
4. Personal Data sheet for students: This tool was prepared by the researcher to co11ect data from the students regarding their name, gender, age, class, parental income, educational qualification, occupation etc.
5. Lesson plan: The researcher prepared lesson plan based on Bruner's Concept Attainment Model for Experimental group and Traditional Teacher-Centered Model for Control group.

COLLECTION OF DATA

A general class was taken by the researcher to be familiar with the topic and to establish rapport with the students. The pre-test was administered for both experimental and control groups separately.

TEACHING THROUGH THE CONVENTIONAL METHOD

The control group was taught six topics through conventional method. The researcher took 40 periods to complete the topics. Each class was of30 minutes duration. The Deductive method and lecture method were used to teach the topics. Questions were asked at the end of each class and the doubts of the students were clarified

ADMINISTRATION OF CONCEPT ATTAINMENT MODEL TO THE EXPERIMENTAL MODEL

The concept attainment model was administered on the experimental group on the same unit. The unit was divided into sub units. Each sub unit was taught in one period of 30 minutes. In each period, a particular concept was introduced and was discussed following to the model. To explain the concepts, the models, charts, flash-cards etc., were used ensuring students active pa11icipation. In the last 10 minutes were devoted to ask questions related to the concepts

covered, re-enforcing the student's learning and to some stimulus va1iation activity. Students at the end explained the concept following the rules of concept attainment model. The unit was completed in next 4 periods of30 minutes each. The post-test was administered both to the control group and to the experimental group after completing the lesson.

ANALYSIS OF DATA

Table.1 Control vs Experimental Group (Pre-test)

Groups	Mean	Standard Deviation	't' value	Level of Significance
Control	23.02	9.01	0.43	No Significance
Experimental	23.72	7.34		

From the above table it is inferred that there is no significant difference bet\veen the control group and experimental group in mean scores.

Table.2 Control vs Experimental Group (Post-test)

Groups	Mean	Standard Deviation	't' value	Level of Significance
Control	50.6	11.5	5.90	0.001
Experimental	66.8	15.5		

The mean of the experimental group was 66.8 and that of the Control group was 50.6. and 't'- value was 5.90 which was significant.

Table.3 Pre-test vs Post-test (Control group)

Groups	Mean	Standard Deviation	't' value	Level of Significance
Pre-test	23.4	8.95		

Post-test	50.6	11.5	13.2	0.001

Table.4 Pre-test vs Post-test (Experimental group)

Groups	Mean	Standard Deviation	't' value	Level of Significance
Pre-test	24.4	7.70	17.3	0.001
Post-test	66.8	15.5		

This table reveals that there is significant difference between the pretest perfo1mance and post-test perfom1ance of the experimental group.

RESULTS

1. There is no significant difference between the means of pre-test score for the experimental and control group.
2. There is significant difference between means of the post test score between the experimental and control group.
3. There is significant difference between the means of the pre-test scores and post-test score of the experimental group.
4. There is marginal difference between the means of the pre- test and post-test scores of the control group.

INTERPRETATION

1. There is no significant difference between the means of the experimental group and the control group in the pre-test. It shows that the two groups were similar.
2. The post-test scores of experimental group and control group differ significantly. The mean score of experimental group is greater than that of contro1 group. This reveals that the increase in the level of academic achievement is due to the application of concept attainment model.
3. The mean of the pre-test score and the post-test for the control group differ significantly with the post-test mean being greater than the pre-test mean.
4. The mean of the pre-test score and the post-test score for the experimental group differ significantly with the post-test mean being greater than the pre-test mean. This shows

that the level of academic achievement increased due to teaching through Concept Attainment Model.

EDUCATIONAL IMPLICATION

It was found that the Concept Attainment Model was significantly effective with the Experimental Group in achieving the objective. All schools should use this model in the class to make the concepts clear to the students. It is found that if once the concepts are clear, there is no difficulty for the learner to understand the topic further. For this, teachers should be made aware of this model.

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Research Article

The Linkage of Official Language and Medium of Instruction in Work Efficiency of Government Employees -A Study

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ABSTRACT

One of the biggest challenges that the state of Tamilnadu facing today is the growing pressure on higher education. The poor knowledge of English which is still the medium of instruction in many colleges creates problems of communication understanding and adjustment of the campus environment. Most of the students are attracted by mother tongue, i.e regional language instruction for higher studies.

The study is very limited to focus on the role of the medium of instruction reflects in the work efficiency of Government employees. The study shows that mother tongue as well as English can be used as administrative language for increasing work efficiency in Government departments.

Keywords: Official Language, Medium of Instruction, Work Efficiency, Government Employee

INTRODUCTION

It is an irony that" learning stops, once a person secures a good job with a five figure salary with perks". The medium of instruction has an inevitable role in the work performance of employees in Government. Administrative language for a state is mostly of regional in nature. Not going in to depth, the study attempts to explain how the regional language as medium of instruction related to efficiency in work performance.

BACKGROUND

Tamilnadu is a larger state when compare to neighbouring states. The state has recorded impressive achievements in both social and economic development during recent periods. Government employees efficiently contributed for a large extend in all sectoral development.

PRESERVATION OF LANGUAGE

There is a concern about the disappearance of languages all over the world. Languages cannot be preserved by making dictionaries of grammar. Languages live if people who speak the language continues to live. So we need to look after the well being of the people who use those languages, which means we need a micro level planning or development model where language is taken as one factor.

DECLINING OF LANGUAGES

Today in India people are trying to move away from their cultural identity. They are trying to conceal their cultural identity thereby giving up their language. Whenever people move from one place to another for their livelihood they carry their language for a while. But the second generation or subsequent generation, no longer feels their earlier language say mother tongue.

LANGUAGE DOMINATION

India is a country with a linguistic diversity. The Indian education system offers primary education in mother tongue in government schools, particularly in rural areas. This may lead to language barriers for rural children in accessing English based education. It poses a chal1enge to the educators and policy makers for overcoming the language barriers. English medium education is on the increase on the side, whereas mother tongue is being treated as secondary on the other side.

DATA SOURCES

Primary data has been made by collecting information through questionnaires and personal interviews consisting of A,B,C & D group employees. Secondary data was collected from books, records and other documents. The study area is limited to the Tamilnadu Secretariat. The sample size is one hundred. The data so obtained has been processed and analysed to give useful inferences which are given below:

Table 1

Percentage distribution of respondents on medium of instruction in education

Medium of instruction	Number of respondents
English	68
Mother tongue/Tamil	32
Total	100

It is observed from the table I that 68%perccnt of the respondents prefer English as medium of instruction at education level, whereas 32% of the respondents wanted to have mother tongue as medium of Instruction. English is found to be a dominating language as far medium of instruction is concerned.

Table 1

Percentage distribution of respondents on official language

Official language	Number of respondents
English	33
Mother tongue/Tamil	22
Both English and Tamil	45
Total	100

The table2 revealed that 33% of respondents are in favour of English as official language whereas 22% of respondents insist Tamil as official language. The notable point is that 45% of respondents expressed the view that the official language can be both English and Tamil.

It is inferred that the highest number of respondents wish to have both English and Tamil as official language.

FINDINGS

Studies reveal that for government offices especially in secretariat English medium of instruction is more appropriate whereas for dealing issues the knowledge of mother tongue is found to be very essential.

English should continue along with regional language as official language. English cannot be displaced easily. Development of a common language like English is essential for the unity and integrity of nation and networking of different nations, which results in ripping the benefits of globalization.

It is evident that rise in the level of education brings a rise in the efficiency of all factors of production. The existence of such a productive and skilled workforce will catalyse development in Tamilnadu.

India is a multilingual, multi-religious and multiracial sub-continent and Tamilnadu remains as an inseparable component of the federal structure of the Nation. English a link language should have a considerate place in the work performance of the government employees.

CONCLUSION

English is the medium in which international scholarship may pa1iicipatc. Without English the access to the world literature is very limited. However Mother tongue has been found to be the best medium of acquiring knowledge. Mother tongue as official language helps for the development of critical thinking and can develop analytical skills.

However it is true that official language cannot be fully either on regional language or on English. Within the state government departments the regional language may be used as official language. English becomes more effective viz in undertakings /boards /corporations/ inter-state communications/ government of India communications/international relationships.

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Research Article

A Study on Influence of Health Status of the Students on Academic Achievement

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ABSTRACT

Education remains the most outstanding development priority areas in the world today. The core purpose of education, unquestionably, is formation of humane. Other things being equal, an educated person who is well or relevantly positioned in the socio-economic culture and political setting is expected to be a valuable asset to the society than another individual who is illiterate and perhaps ignorant. This simple fact explains why researchers and scholars all over the world, continue to do research into ways of improving human knowledge and development. Educational research is that activity which is directed towards development of a science of behaviour in educational situations.In the present day of industrialization, competition, stress and tension among young make them face lot of difficulties. These difficulties give rise to many psychosomatic problems such as anxiety, tensions and frustrations and emotional upsets in day-to-day life.This study has sought to investigate the influence of health status of the students on academic achievement in science among upper primary, secondary and higher secondary students. Since a very limited number of studies have addressed health status of students in India, and because of the seriousness of its adverse consequences, it was considered important to explore this issue further. There is a need to attempt to understand this immense problem from all angles of the planners, the educator and the students. The most important and least known is the child's angle of this context. It was felt that this study should be attempted to reveal the problems faced by this large important group of student.

Keywords: Health Status, Academic Achievement, Student Health, Educational Performance, Physical Wellbeing, School Students, Health and Education

INTRODUCTION

School-based Health Interventions and Academic Achievements provide important new evidence that link students' health and academic perfom1ance. It identifies proven health interventions and practical resources that can positively affect both student health and academic achievement. **Health and Education are linked**. Health risks and academic risks affect each student in middle, high &higher secondary school. Students who perform poorly in school may have more health risks, which adversely affect their achievement and in turn contribute to health risks. Data from the Healthy Youth Survey in Washington State provide a new way of looking at the relationship between health risk and academic achievement. The report examines physical, mental and social health risk factors and analyses the relationship between these specific health factors and the students' grades.

A great deal of research is available to describe the relationship between educational attainment and health among adults. We can safely say that more highly educated adults tend to be healthier. For this reason, public health advocates are giving increased attention to the social determinants of health for improving public health. The social determinants of health arc the conditions in which people are born, grow, live, work, and age. These include income, education, and access to resources. **Adults who are more educated tend to be healthier. For students, unhealthy behaviours and educational challenges may influence each other, or have common root causes.**

Physical Health

There is growing evidence that regular physical activity enhances learning and school achievement. Physical activity fuels the brain with oxygen, enhances connections between neurons and assists in memory. Children in daily physical activity have shown superior academic performance and better attitudes towards school. Schools that offer intense physical activity programmes have shown positive effects on academic achievement, including increased concentration; improved Science &Mathematics, reading and writing test scores; and reduced disruptive behaviour, even when time for physical activity reduces the time for academics. A study conducted on the effects of reducing class time for increased physical activity found that test scores increased for those students. Specifically, when class time for academics was reduced in two schools by 240 minutes per week to enable increased physical activity exposure, Science & Mathematics scores in the experimental group were consistently

higher than for others not in the programme. In another study conducted by the California Department of Education Healthy Kids Programme Office preliminary findings show that the lowest performing schools have lower physical activity levels among their students, with little difference across schools in the top three qualities. This suggests that the lowest performing schools may benefit from physical activity programmes.

Mental Health

The ability of children to learn can be significantly affected their mental health. Emerging evidence suggests exposure to violence has lifelong effects on learning and threatens students' academic performance. This is manifested in students' lack of interest and behaviour problems at school, poor concentration, low grades, low self-esteem, high dropout rate and general decline in academic performance. An investment in prevention and intervention services for school children can also help assist students in their development and well-being. The California Association for Counselling and Development research findings indicate that school counselling programs have a significant influence on reducing discipline problems by ensuring that all students have skills in conflict resolution. Further more, elementary guidance activities have a positive influence on students' academic achievement by ensuring that all students have learning skills. Finally, school counsellors can be effective in assisting students in the development of career goals and plans.

Social Health

Poor achievement as the major factor and further observed that **under nourishment, crowded 1.iving condition, low level nourishment, low level parental education** and **inadequate training by parents** were associated with low academic achievement. **Interventions Can Narrow Disparities.** Lack of equal chances for success (the result of poverty, discrimination, unequal access to services, and other factors) affect a person's health. These patterns of socio-economic disparities are often the same for disparities in academic achievement. It may be unrealistic to expect to close the achievement gap for disadvantaged youth without addressing wellness;· readiness to learn, and the conditions affecting the health of the community.

REVIEW OFRELATED LITERATURE

Youth are in the process of completing their education, and in some cases are also initiating unhealthy behaviours (such as experimenting with alcohol or tobacco). Do unhealthy behaviours decrease the ability of young people to succeed in school? Or do challenges in school influence young people to take up unhealthy behaviours? It may be that each influences the other and that the relationship can work in either direction. Also, there seem to be underlying factors that influence both academic achievement and health, such as insufficient family income or childhood trauma.

Researchers have suggested that the relationship between health and achievement works in different ways. For example, **Hawkins, Catalano, and :MIiler (1992)** found that **"low degree of commitment to school"** and **“academic failure/poor achievement”** are associated with substance abuse. **Townsend, Flisher, and King (2007)** specifically studied the direction of the relationship between health and achievement by looking at previously published studies, but that more research was needed to understand how the relationship worked. **Healthy Students Learn Better.**

California's state education system (2005) published an extensive rep01t linking academic achievement and health. A study by researchers at the University of Washington found that Washington State schools with a lower prevalence of substance abuse also had higher scores on the Washington Assessment of Student Leaming (WASL). The Centres for Disease Control and Prevention (CDC) recognizes the impact of health on academic achievement, stating: **recognizes that the academic success of America's youth is strongly linked with their health. In turn, academic success is an excellent indicator for the overall well-being of youth, and is a primary predictor and determinant of adult health outcomes.**

Research Topic

Topic selected for this research is **'A STUDY ON INFLUENCE OF HEALTH STATUS OF THE STUDENTS ON ACADEMIC ACHIEVEMENT'**

Statement of the Problem

'A STUDY ON INFLUENCE OF HEALTH STATUS OF THE STUDENTS ON ACADEMIC ACHIEVEMENT'

Objectives of the Study

- To study the relationship between school students' academic achievement and health status.
- To study the relationship between school students' illness and the academic achievement.
- To study the relationship between school students varying forn1s of illnesses.
- To analyse the relationship between various school levels.

Hypothesis of the study

- There is no significant relationship between students' academic achievement and health status.
- There is no significant relationship between students' illness and the academic achievement.
- There is no significant relationship between students varying forms of illnesses. There is no significant relationship between various school levels.

RESEARCH DESIGN

This research is based on the exploratory design. The exploratory study is particularly helpful in breaking broad and vague problem into smaller, more precise sub-problem statements., hopefully, in the form of specific hypotheses.

TOOLS DESCRIPTION:

The questionnaire prepared in this study was mainly aimed at personal interview and was contained open, multi-choice questions, dichotomous questions and also checklists.

SAMPLE DESCRIPTION

Chennai city is selected as the study area for this research. Chennai is a metropolitan city where it includes all type of schools such as Government, Aided, Private, with varied demographic factors.

For this research study 160 students in Chennai city selected as the sample.

RESEARCH TECHNIQUES

Chi-square and Rank Correlation

Table 1: Factors influencing students' academic achievement and health status

Academic Achievement	Health Status	Health Status	Health Status	Total
	Good	Average	Poor	
90-100% Marks	13	17	11	41
80-90% Marks	5	8	5	18
70-80% Marks	12	15	10	37
60-70% Marks	5	6	0	11
50-60% Marks	11	31	11	53
Total	46	77	37	160

Table 2: Estimation of Chi-square

Observed Value [o]	Expected value [e]	0-E	[O-E]2	_[O-E]2_/E
13	11.79	1.21	1.47	0.12
5	5.18	-0.18	0.03	0.01
12	10.64	1.36	1.86	0.17
5	3.16	1.84	3.38	1.07
11	15.24	-4.24	17.96	1.18
7	19.73	-2.73	7.46	0.38
8	9.66	-0.66	0.44	0.05
15	17.81	-2.8]	7.88	0.44
6	5.29	0.71	0.50	0.09
31	25.51	5.49	30.18	1.18
11	9.48	1.52	2.31	0.24
5	4.16	0.84	0.70	0.17
]	8.56	1.44	2.08	0.24
0	2.54	-2.54	6.47	2.54
11	12.26	-1.26	1.58	0.13

Calculated value 8.01

Since the calculated value is less than the tabulated value therefore Null Hypothesis is accepted. Therefore there is no significant relationship between respondent's academic achievement and health status.

Table 3: students' illness vs. academic achievement

Academic Achievement Level

Illness	Great Extent	Some Extent	Not At All	Total
Obesity	9	21	16	46
Insufficient exercise	11	23	17	51
Sleep Deprivation	6	32	25	63
Total	26	76	58	160

Table 4: Estimation of Chi-square

Observed value [o]	Expected value [e]	O.E	[O-E]2	-[O-E]2-/E
9	7.48	1.53	2.33	0.31
11	8.29	2.71	7.36	0.89
6	10.24	-4.24	17.96	1.75
21	21.85	-0.85	0.72	0.03
23	24.23	-1.23	l.50	0.06
32	29.93	2.08	4.31	0.14
16	16.68	-0.68	0.46	0.03
17	18.49	-1.49	2.21	0.12
25	22.84	2.16	4.68	0.20

Calculated value 3.544

Tabulated chi-square value at 5% significant level= 9.49.Since the calculated value is less than the tabulated value. "Therefore there is no significant relationship between respondents' illness and the academic performance of the students" hypothesis is accepted.

Table 5: The standard of the student' varying forms of illnesses Standard of the respondents

Illness	Upper Primary	Secondary	Higher Secondary	Total
Great extent	17	21	11	49
Considerable extent	6	8	5	19
Some extent	14	16	9	39
Not at all	14	26	13	53
Total	51	71	38	160

Table 6: Estimation of Chi-square

Observed value [o]	Expected value [e]	O.E	[O-E]2	-[O-E]2-/E
17	15.62	1.38	1.91	0.12
6	6.06	-0.06	0.00	0.00
14	12.43	1.57	2.46	0.20
14	16.89	-2.89	8.37	0.50
21	21.74	-0.74	0.55	0.03
8	8.43	-0.43	0.19	0.02
16	17.31	-1.31	1.71	0.10
26	23.52	2.48	6.16	0.26
l1	11.64	-0.64	0.41	0.03
5	4.51	0.49	0.24	0.05
96	9.26	-0.26	0.07	0.01
13	12.59	0.41	0.17	0.01

Calculated value 1.333

Tabulated Chi-square value at 5% significant level= 12.59. Since the calculated table value is less than the tabulated value. "Therefore there is no significant relationship between students' illness and the standard of the students" is accepted.

Table 7: Difference between various levels of schools

Levels of Student!	Observed	Expected	0-E	$(O-E)^2$	$(O-E)^2/E$
UPPER PRIMARY	51	31	20	400	13.33
SECONDARY	71	**51**	20	400	7.84
HIGHER SECONDARY	38	24	14	196	8.16
	160	106	54	996	29.33

$X^2=\sum (O-E)^2/E$

=29.33

Degrees of freedom = (n-1)=(3-1) =2

Table Value=l 1.07

Hence the Calculated Value is greater than the Tabulated Value. So the above hypothesis "There is no significant relationship between various school levels" is rejected and there is significant relation between the various levels of schools.

FINDINGS&SUGGESTIONS

Findings

- There is no significant relationship between respondents' illness and the academic performance of the respondents.
- There is no significant relationship between respondents' illness and the standard of the respondents.
- There is significant relation between the various levels of schools.

Scope and Limitations

Teachers and parents know that a student who arrives at school fed, rested, calm, and unworried is ready to learn. Research also supports the idea that healthy students learn better. In a recent longitudinal study, after accounting for family characteristics, adolescents with poorer general health were found to be less likely than healthier students to graduate from high school on time and attend college or post-secondary education. Ultimately, fatigue or damage results, and the ability of the body to repair and defend itself can become se1iously compromised. As a result, the risk ofinqui1y or disease escalates.

Limitation of the Study

- Even though the survey was conducted among the primary, secondary & higher secondary students may not reflect the real opinion of the total population.
- Because of time constraints, the sample size in restricted to 160, which may not reflect the opinion of the entire population.
- Since the study was restricted to 160 students of primary, secondary & higher secondary, majority of findings are applicable only to this class and cannot be generalized.
- The samples may behave or give opinions differently at different times because of their psychological temperament. This will affect the survey.

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Conceptual Article

Multi Techno Pedagogy for Mixed Ability Learner

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ABSTRACT

Multiple intelligences are an educational theory developed by Howard Gardner, which describes an array of different kinds of “intelligences" exhibited by human beings. Gardner suggests that each individual manifests varying levels of these different intelligences and thus each person has a unique "cognitive profile. The theory suggests rather than relying on a uniform curriculum, schools should offer "individual-cantered education", with curriculum tailored to the needs of each child. Gardner identifies kinds of intelligences based upon nine criteria. His nine criteria describe something as an independent kind of intelligence. Multiple Intelligences is a way of understanding the intellect. Howard Gardner originally identified and labelled seven different kinds of intelligences, although he recently added an eighth. There has even been some consideration of a ninth intelligence - existential intelligence. The eight intelligences according to Gardner are: Musical Intelligence, Bodily-Kinesthetic Intelligence, Logical-Mathematical Intelligence, Linguistic Intelligence, Spatial Intelligence, Interpersonal Intelligence, Intrapersonal Intelligence and Naturalist Intelligence. The theory has been widely criticized in the psychology and educational the01y communities. The most common criticisms argue that Gardner's theory is based on his own intuition rather than empirical data and that the intelligences are just other names for talents or personality types. Despite these criticisms, the theory has enjoyed a great deal of success amongst educators over the past twenty years. There are several schools which espouse MI as pedagogy and many individual teachers who incorporate some or all of the theory into their methodology. Many books and educational materials exist which explain the theory and how it may be applied to the classroom.

Keywords: Multi Techno Pedagogy, Mixed Ability Learners, Technology-Enhanced Learning, Differentiated Instruction, Digital Pedagogy, Inclusive Education, Classroom Innovation

Multiple Intelligence

Multiple intelligences are an educational theory developed by Howard Gardner. It describes an array of different kinds of "intelligences" exhibited by human beings. Gardner suggests that each individual manifests varying levels of these different intelligences and thus each person has a unique "cognitive profile." The theory was first laid out in Gardner's 1983 book, Frames of Mind: The Theory of Multiple Intelligences. And has been further refined in subsequent years. The theo1y was proposed in the context of debates about the concept of intelligence and whether methods which claim to measure intelligence (or aspects thereof) are truly scientific. The the01y suggests that, rather than relying on a uniform curriculum, schools should offer 11individual-centered education", with curriculum tailored to the needs of each child. His criteria of intelligence describe something as an independent kind.

Multiple Intelligences is a way of understanding the intellect. Howard Gardner originally identified and labelled seven different kinds of intelligences, although he recently added an eighth. There has even been some consideration of a ninth intelligence - existential intelligence. The eight intelligences according to Gardner are: Musical Intelligence, Bodily-Kinaesthetic Intelligence, Logical-Mathematical Intelligence, Linguistic Intelligence, Spatial Intelligence, Interpersonal Intelligence, Intrapersonal Intelligence and Naturalist Intelligence.

The theory has been widely criticized in the psychology and educational theory communities. The most common criticisms argue that Gardner's theory is based on his own intuition rather than empirical data and that the intelligences are just other names for talents or personality types. Despite these criticisms, the theory has enjoyed a great deal of success amongst educators over the past twenty years. There are several schools which espouse MI as pedagogy and many individual teachers who incorporate some or all of the theory into their methodology. Many books and educational materials exist which explain the theory and how it may be applied to the classroom.

Bodily-Kinaesthetic Learners

Bodily-Kinaesthetic area has to do with movement and doing. In this category, people are generally adopted at physical activities such as sports or dance and often prefer activities

which utilize movement. They may enjoy acting or performing and in general they are good at building and making things. They often learn best by physically doing something, rather than reading or hearing about it. Those with strong bodily-kinaesthetic intelligence seem to use what might be termed muscle memory; i.e., they remember things through their body, rather than through words (verbal memory) or images (visual memory). It requires the skills and dexterity for fine motor movements such as those required for dancing, athletics, surgery, craft making and computer engineering, etc. These learners like to create and move around. Get them involved with gathe1ing and organizing physical materials, keyboarding, acting out roles, or manipulating objects. They would like to nm the can1era, operate the mouse, or take the pictures. Careers suit with this intelligence include athletes, dancers, actors, surgeons, comedians, builders, soldiers and artisans.

ICT based Education for Bodily-Kinaesthetic Learners

These "body smart" people learn best through physical activity such as dance, hands-on tasks, constructing models and any kind of movement. They are able to manipulate and control objects, as well as express their ideas through movement. Give these learners a video camera and let them record their movement such as a wood working activity or a skit. Add other intelligences such as taking still pictures and Writing about the steps in the process. ICT based education can be provided for Bodily/Kinaesthetic Leamer by teaching and making the learners in doing assignments through animation in Adobe Flash; Browsing Virtual Field Trip; Using and creating other construction kit projects through Logo and Robotics; Making Video production through skits, dances, sports, role playing and demonstrations and allowing to operate Digital still and video cameras in video-shooting skits, plays, role playing and demonstrations.

Interpersonal Learners

Interpersonal area has to do with interaction with others. People in this category are usually extroverts and are characterized by their sensitivity to others' moods, feelings, temperaments and motivations and their ability to cooperate in order to work as part of a group. They communicate effectively and empathize easily with others and may be either leaders or followers. They typically learn best by working with others and often enjoy discussion and debate. They are good at rallying the group together and getting discussions going. They are good at teaching other members of the group and coordinating activities. In a group project,

they are good at peer editing Careers suit those with this intelligence include politicians, managers, teachers, social workers and diplomats.

ICT based Education for Interpersonal Learners

These "social smart" people learn best through interaction with other people through discussions, cooperative work, or social activities. They are able to create synergy in a room by being aware of the feelings and motives of others. ICT based education can be provided for Interpersonal Learners in group projects and Peer tutoring; Making peers through Blogs, Email projects, Chat Forums and discussions; Video and teleconferencing, Web quests with collaborative elements; Video recording - sharing with others through skits, debates and role plays; Word processing through chain writing, group editing, peer writing, brainstorming and also Collaborative computer software or games and Group presentations of their work.

Verbal-Linguistic Learners

Verbal-Linguistic area has to do with words, spoken or written. People with verbal-linguistic intelligence display a facility with words and languages. They are typically good at reading, writing, telling stories and memorizing words and dates. They tend to learn best by reading, taking notes, listening to lectures and via discussion and debate. They are also frequently skilled at explaining, teaching and oration or persuasive speaking. Those with verbal-linguistic intelligence learn foreign languages very easily as they have high verbal memory and recall and an ability to understand and manipulate syntax and structure. They enjoy being the secretary, taking notes and using the word processor. They would enjoy organizing the group's text and putting the project together. They enjoy the researching, listening, reading and writing aspects of a research project. Careers suit to this intelligence include writers, lawyers, philosophers,joumalists, politicians and teachers.

ICT based Education for Verbal-Linguistic Learners

These "word smart" people learn best through language including speaking, writing, reading and listening. They are able to verbally or in writing explain, convince and express themselves. They enjoy writing and creating with words. They would also enjoy e-books, interactive books on CD-ROM and other text-based software. ICT based education can be provided for Verbal/Linguistic Learners by Writing a video script ; Voice annotation in word processing; Giving comments and assignment submission through word processing ; Story-creations and verse writing and utilizing different word processing software; Referring

electronic reference tools - encyclopaedia dictionaries; Discussing and debating through email, discussion lists and forums; Sharing a poem myth, legend, news article through web development tools; Recording oral histories and interviews through audio recorders and digitizers and also speaking, debating, dramatizing, Reading and interpreting web information.

Logical-Mathematical Learners

Logical-Mathematical area has to do with logic, abstractions, inductive and deductive reasoning and numbers. This intelligence naturally excel in mathematics, chess, compute1 programming and other logical or numerical activities, a more accurate definition places emphasis less on traditional mathematical ability and more reasoning capabilities, abstract pattern recognition, scientific thinking and investigation and the ability to perform complex calculations. They enjoy collecting data, conducting experiments and solving problems. Creating spreadsheets, databases, charts and other data organization and calculation projects would be their contribution to a group. They enjoy problem solving, measuring, sequencing, predicting, experimenting, classifying and data collection aspects of a research project. Careers suit with this intelligence include scientists, mathematicians, engineers, doctors and economists.

ICT based education for Logical/Mathematical Learner

These "number smart" people learn best through numbers, reasoning and problem solving. They are able to create and manipulate visuals and create mental pictures from many perspectives. They like to weigh, measure, calculate and organize data. Give learners opportunities to create ot manipulate data they find on the Internet. Provide them with a video camera to record their scientific experiment. Get them to use other intelligences in their sharing of data such as making an analogy 01 debating an issue through Organizational tools (databases, calendars); Calculation tools (spreadsheets); Online calculation tools and utilities; Science and Mathematics software like Spreadsheets, Statistics and Graphing calculators; Strategy, logic and critical thinking software; Desktop presentation (PowerPoint) for showing results and also Computer-aided design - for problem solving.

Naturalistic Learners

Naturalistic area has to do with nature, nurturing and relating infom1ation to one's natural surroundings. This is the eighth and newest of the intelligences, added to the theory in 1999 and is not as widely accepted as the 01iginal seven. This type of intelligence was not part of Gardner's original theory of Multiple Intelligences. Those with it are said to have greater sensitivity to nature and their place within it, the ability to nurture and grow things and greater ease in caring for, taming and interacting with animals. They may also be able to discern changes in weather or similar fluctuations in their natural surroundings. They are also good at recognizing and classifying different species. "Naturalists" learn best when the subject involves collecting and analyzing, or is closely related to something prominent in nature; they also don't enjoy learning unfamiliar or seemingly useless subjects with little or no connections to nature. It is advised that naturalistic learners would learn more through being outside or in a kinaesthetic way. They could enjoy field trips that involve observation and recording the world around them Careers suit with this intelligence include scientists, naturalists, conservationists, gardeners and fanners.

ICT based education for Naturalist Learner

These "nature" people learn best through the interactions with the environment including outdoor activities, field trips and involvement with plants and animals. They sec the subtle meanings and patterns in nature and the world around them. They are able to adapt. ICT based education can be provided for Naturalist Learner by recording the natural world through Audio and video cameras; Recording natural world, field trips through Digital cameras and reporting it through Word processing - journaling the information and also studying the micro organism through use microscopes.

Intrapersonal Learners

Intrapersonal area has to do with introspective and self-reflective capacities. Those who are strongest in this intelligence are typically introverts and prefer to work alone. They are usually highly self-aware and capable of understanding their own emotions, goals and motivations. They often have an affinity for thought-based pursuits such as philosophy. They learn best when allowed to concentrate on the subject by themselves. There is often a high level of perfectionism associated with this intelligence. They are good at setting_ and pursuing goals

and assessing work. They are good at working independently toward a group goal. Careers suit with this intelligence include philosophers, psychologists, theologians, writers and scientists.

ICT based education for Intrapersonal Learner

These "self smart" people learn best through metacognitive practices such as getting in touch with their feelings and self motivation. They are able to concentrate and be mindful. Provide tools to help learners "think about their thinking" through writing, diagramming, or recording ideas. ICT based education can be provided for Intrapersona1 Learner through computer-based journaling and Internet research- self paced software; Writing diaries and journals through Word processing; Video projects by record personal ideas and making them to create Multimedia portfolios and Blogs.

Spatial Learners

Spatial area has to do with vision and spatial judgment. People with strong visual-spatial intelligence are typically very good at visualizing and mentally manipulating objects. They have a strong visual memory and are often artistically inclined. Those with visual-spatial intelligence also generally have a very good sense of direction and may also have ve1y good hand-eye coordination, although this is normally seen as a characteristic of the bodily-kinaesthetic intelligence. They would enjoy illustrating the project, identifying the visuals, color-coding the presentation and creating that story board for the project. They enjoy identifying project visuals and visualizing aspects of, research project. Careers suit with this intelligence include artists, engineers and architects.

ICT based education for Visual/Spatial Learner

These "picture smart" people learn best visually and tend to organize their thinking spatially They like to think and create pictures. They are also drawn to information that is presented in a visual form. Encourage learners to combine visual elements such as editing photographs or enhancing line drawings. Encourage them to add other intelligences such as written or oral descriptions 01 discussions. Ask them to make visual metaphors and stories. ICT based education can be provided for Visual/Spatial Leamer through photo sharing websites and editing and modifying the pictures 01 websites through imaging software - Fireworks; Photoshop, Paint, Illustrator and CorelDraw Designing the websites with visual organizers or use colour; Assigning to do scrap booking, photo albums and slide shows: oral history projects and also assigning to do computer-generated charts. graphs and tables.

Musical Learners

Musical area has to do with rhythm, music and hearing. Those who have a high level o1 musical-rhythmic intelligence display greater sensitivity to sounds, rhythms, tones and music. The) normally have good pitch and may even have absolute pitch and are able to sing, play musical instruments and compose music. Since there is a strong aural component to this intelligence, those who are st1·ongest in it may learn best via lecture. In addition, they will often use songs or rhythms tc learn and memorize information and may work best with music playing in the background. The) like to choose and compose music for multimedia presentations. They like to see and hear patterns, so they may be good at sequencing a presentation. They are good listeners, so ask them to look fo1 things that might be missing after watching a Careers suit with this intelligence include instrumentalists, singers, conductors, disc-jockeys and composers.

ICT based education for Musical/Rhythmic Learner

These "music smart" people learn best through sounds including listening and making sounds such as songs, rhythms, patterns and other types of auditory expression. They are able to use inductive and deductive reasoning and identify relationships in data. Provide learners with audic and video recorders to capture their musical expressions. Ask them to choose appropriate music tc go with a slide show, artwork, or poem. Create and record hand-made instruments. Add othe1 intelligences such as drawing patterns of music or writing about music and sounds. JCT based education can be provided for Musical/Rhythmic Learner to express their audio notation in word processors and creating music sharing sites; editing music through music composition software: Preparing DVDs and CD-audios, Interactive books with audio elements and also video and audio recording the digitize singing and musical instruments.

Existential Learners

Existential area is the capacity to raise and reflect on philosophical questions about life, death and ultimate realities and meets most of the criteria with the exception of identifiable areas of the brain that specialize. Moral capacities were excluded because they are normative rather than descriptive. Anew intelligence is existentialist. These "wondering" people learn best through seeing the "big picture" of human existence by asking philosophical questions about the world.

ICT based education for Existentialist Learner

ICT based education can be provided for Existentialist Leamer by providing ICT tool like Email, chat, teleconferencing and other interactive communication tools to help learners address their questions.

Conclusion

For every new innovation, there will be an anticipated outcome and the better one will exist till its end. If we take evolution theory, it says that better and good one will exists as ever last one. So this new theme of intelligence in the field of education also exists because of its adaptability towards the interest of its learner. There is no doubt technology collaborated multiple intelligence will rocks out the future education.

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