Analysis of existing learning styles and factors affecting the learning styles of the employees working in IT/ ITes sector

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ABSTRACT: *Today's competitive world pushes every organization to become a learning organization. Different organization follows different learning strategies to make the organization open to learn. Information technology based organization s concentrates more on the openness to learn and update with new trends in the process of organizational development. Learning efficiency of the employees forms the basis of attaining the objectives without any deviations in learning strategy. Learning style of the employees determines the knowledge absorption, learning strength and personal preferences in their learning. The learning style of the individual is the way in which individual learner begins to concentrate on, process absorb and retain new and difficult information. Thus various learning styles have been identified by the researchers such as field independent, field dependent, Convergent, Divergent, Holist, Assimilator, and Explorer and so on. The validity of these styles can be measured using instruments such as COGNITIVE STYLE INDEX (CSI), LEARNING STYLE INVENTORY, GREGORIC STYLE DELINEATOR, MEYERS-BRIGGS TYPE INDICATOR (MBTI) and others. The styles are thus analyzed with the help of these instruments. The learning style of the employees is influenced by various factors such as intelligence, aptitude, personality, motivation and attitude, learner beliefs and age of acquisition. These factors are analyzed and the ways for improving the learning efficiency of the employees on job training are explained.*
Keywords: Cognitive style, Learning strategy and Learning style.

I. INTRODUCTION

Definition: *Learning style is an innate pattern of thinking, perceiving, and problem solving and remembering when approaching a learning task.*

1.1 Objectives of the research
- To analyze the different learning styles of the employees working in IT/ITes sector and analyze using instruments.
- To find the factors influencing the learning style of the individuals and analyzing the similarities between the learning styles

1.2 Scope of research
- The study is restricted to IT/ITes sector within Tamilnadu**.**
- The better understanding of learning style helps the organization who has their strategies of becoming an open to learn organization.
- Students and workers of all ages enjoy and benefit from suitable learning-style fitted training. Learning-style approaches help us to produce our best work in the classroom or workplace.

II. REVIEW OF LITERATURE AND RELATED STUDIES
2.1 Existing learning styles
Researchers have found over thirty learning styles existing among the individuals. Listed below are some of the empirically validated styles.

2.1.1 Field independent learning style
- Makes specific concept distinctions; little overlap
- Interested in new concepts for their own sake
- Has self-defined goals and reinforcement

2.1.2 Field dependent learning style
- Requires externally defined goals and reinforcements

- Needs organization provided
- More affected by criticism
- Uses observational approach for concept attainment [learns best by using examples]

2.1.3 Convergent learning style
- Doing and thinking
- Believes that there is a "correct" answer to the problem
- Solve or approaches problem by using theories, principles and other data
- Prefers working alone

2.1.4 Divergent learning style
- Likes to gather information and observe things
- Creative, open-minded and respectful of other people's perspective
- Prefers working in team

2.1.5 Accommodating learning style
- Prefers doing "hands-on" work (action oriented)
- Prefers intuition over logic
- Prefers working in team

III. IDENTIFYING AND MEASURING LEARNING STYLES
The researchers have found various tools and methods for measuring learning styles. Following are some of the instruments used to measure the learning styles of the individuals.
- Learning Styles Inventory (LSI)
- Cognitive Style Analysis (CSA)
- Gregoric Style Delineator (GSD)

3.1 Learning Styles Inventory
The LSI is not a criterion-referenced test and is not intended for use to predict behavior for purposes of selection, placement, job assignment, or selective treatment. This includes not using the instrument to assign learners to different educational treatments, a process sometimes referred to as tracking. Such categorizations based on a single test score amount to stereotyping that runs counter to the philosophy of experiential learning, which emphasizes individual uniqueness.

3.1.1 Purpose of LSI
To serve as an educational tool to increase individuals' understanding of the process of learning from experience and their unique individual approach to learning. By increasing awareness of how they learn, the aim is to increase learners' capacity for meta-cognitive control of their learning process, enabling them to monitor and select learning approaches that work best for them in different learning situations. By providing a language for talking about learning styles and the learning process, the inventory can foster conversation among learners and educators about how to create the most effective learning environment for those involved. For this purpose, the inventory is best presented not as a test, but as an experience in understanding how one learns. Scores on the inventory should not be interpreted as definitive, but as a starting point for exploration of how one learns best. To facilitate this purpose, a self-scoring and interpretation book that explains the experiential learning cycle and the characteristics of the different learning styles, along with scoring and profiling instructions, is included with the inventory and to provide a research tool for investigating experiential learning theory (ELT) and the characteristics of individual learning styles.

3.2 Cognitive Style Analysis
The terms learning style and cognitive style are closely related and are used interchangeably. Both operate without individual's awareness and are assumed to be less amenable to change and conscious control.

3.2.1 Definition: Cognitive style

An innate habitual approach to processing information when engaging in cognitive tasks such as problem solving, thinking. Perceiving and remembering. It has a high degree of stability and consistency.

3.2.2 Dimensions of Cognitive style

The Wholist-Analytic dimension of cognitive style describes the habitual way in which individual organizes and structures information: some individuals will deconstruct information to its component parts (described as Analytics); others will retain a global or overall view of information (described as wholists) and The Verbal-Imagery dimension of cognitive style reflects an individual's habitual mode of representation of information in memory during thinking. Verbalizers "consider the information they read, see or listen to, in words or verbal associations"; Images on the other hand, when they read listen to or read information "fluent spontaneous and frequent pictorial mental pictures".

3.2.3 Assessment of Cognitive Style

A number of self-support tools are available for the assessment of cognitive style. An individual's cognitive style may be assessed quickly, easily and probably more directly, using the computer presented *Cognitive Style Analysis.* This instrument assesses both dimensions of style by means of a direct rather than self-support, assessment of individual's habitual method of processing information. The computer records an individual's responses and computes his or her Wholist-Analytic ratio (low ratio correspond to a wholist style and high ratio to Analytic style) and a Verbalizer-Imager ratio (low ratio represents a Verbaliser style and a high ratio to an Imager style).

3.3 Gregoric Style Delineator

Gregoric Style Delineator provides an organized way to consider how the mind. The Mind Styles™ Model, created by Anthony F. Gregorc in 1984, is a model that uses **perceptual and thinking/ processing** modes to determine four preferred learning styles. It is a modified version of Kolb's learning dimensions, focusing on random and sequential processing of information. The Mind Style's learning types are based on the concept that individuals learn through:

1. Concrete Sequential (CS)
2. Abstract Random (AR)
3. Abstract Sequential (AS)
4. Concrete Random (CR)

Table 3.3.1:
Following tables represents the qualities of Concrete sequential and abstract sequential, concrete random and abstract random

CONCRETE SEQUENTIAL	ABSTRACT SEQUENTIAL
This learner likes: • Logical sequence and following directions, predictability **They learn best when:** • They have a structured environment • They can rely on others to complete this task **What's hard for them?** • Working in groups • Working in an unorganized environment	**This learner likes:** • Analyzing situations before making a decision or acting and applying logic in solving or finding solutions to problems **They learn best when**: • They have access to experts or references • Placed in stimulating environments **What's hard for them?** • Being forced to work with those of differing views • Repeating the same tasks over and over
CONCRETE RANDOM	ABSTRACT RANDOM
This learner likes: ☐experimenting to find answers and taking risks **They learn best when:** ☐they are able to use trial-and-error approaches	**This learner likes:** ☐ to listen to others and bringing harmony to group situations **They learn best when:** ☐ in a personalized environment

☐ able to compete with others	☐ able to maintain friendly relationships
What's hard for them?	**What's hard for them?**
☐ Restrictions and limitations	☐ Concentrating on one thing at a time
☐ Routines	☐ Accepting even positive criticism

IV. FACTORS INFLUENCING LEARNING STYLES OF EMPLOYEES

There exist various personal and organizational factors affecting the learning style of the employees. Stress, personality and motivation are some of the personal factors influencing the employees' learning style.

4.1 Personal Factors

Stress, personality and motivation are some of the personal factors influencing the employees' learning style.

4.1.1 Sensation and Perception

Sensation and perception are the psychological factors affecting the learning style of employees. Sensation is at the core of perception. These are five sense organ i. e. skins, ears, tongue, eyes and nose. This sense organ is the gateway of knowledge and help in perception of various stimuli in the environment. Thus sensing capacity has a greater influence in affecting the grasping capacity of the employees.

4.1.2 Fatigue and Boredom

It is virtually boredom or lassitude rather than fatigue which bothers the employees. The difference between the two is that fatigue is mental and physical tiredness which decrease the competency to work. Boredom on the other hand is a lack of desire or aversion to work.

4.1.3 Needs

A need is lack of something which, if provided would facilitate employees usual behavior. If there is something lacking then the employee tries to perform that activity which culminates in the satisfaction of that need. Thus, the needs are associated with goals.

4.1.4 Motivation

Motivation is the heart of learning process. It generates the will in an employee to do something. Two types of motivation are recognized Intrinsic and Extrinsic motivation. Intrinsic motivation arises when the resolution of the tension is to be found in mastering the learning taskitself andextrinsic motivation occurs when an employee pursues a learning task for external reasons.

4.2 Organizational Factors

4.2.1 Current Job Role

The first level of factors influencing learning style is the person's current job role. The task demands and pressures of a job shape a person's adaptive orientation. Executive jobs, such as general management, that requires a strong orientation to task accomplishment and decision making in uncertain emergent circumstances require an Accommodating learning style. Personal jobs, such as counseling and personnel administration, which require the establishment of personal relationships and effective communication with other people, demand a Diverging learning style.

4.2.2 Adaptive Competencies

The most immediate level of forces that shapes learning style is the specific task or problem the person is currently working on. Each task we face requires a corresponding set of skills for effective performance. The effective matching of task demands and personal skills results in an adaptive competence.

4.2.3 Time perspective

Within an organization, individuals, groups, departments, or functions, may all hold very different perspectives of time and the implications time horizons hold for the necessity of learning. Therefore, it is important that the top leadership of the organization clearly determine the time orientation for the organization

as a whole, such that decision-making and learning take place in a manner consistent with the organization-wide time orientation and perspective.

4.2.4Time pressure

Time pressure can influence learning from within the organization (top-down, bottom-up, peer-to-peer) as well as from external sources such as competitors, suppliers, customers, and communities. Time pressures can actually slow learning, as in the case when the organization is threatened by internal or external forces that paralyze the organization for fear that taking action could risk undesirable consequences. Likewise, *learning and performance can be accelerated*, for example, by the *threat of deadlines or competitive maneuvers* in the market.Thus these are the personal and organizational factors affecting the learning style of the employees.

4.3 Recommendations

* Employees under the *same age* can be placed **under one training basket** in order to avoid age related factors
* The *instructional methods* should be *interactive* thus *boredom* of employees can be minimized. The time taken for training should be optimal.
* Learning strategies and goals should be well informed and hence the employees will be clear about the learning objectives.

V. CONCLUSION

The learning styles of the employees have a greater influence in improving efficiency of the organization. The advantages and applications are discussed below.

Advantages

The *learning strategy* carried out by the organization for the *purpose of organizational development*in IT sector stands on the *base of the employee's learning capacity.* The learning style influences the learning capacity of the employees. A better understanding of the learning style of the employees leads to achievement of learning objectives. *Learning efficiency* of the employees helps the organization to *update with new technical trends and processes.* Analysis of factors affecting the learning styles helps to find a best-fit instructional method and thus better profit for the organization through improved knowledge of the employees.

Applications

The Learning Style Inventory(LSI) helps in finding out the learning style of the employees and thus best suited instructional method can be followed in accordance with learning style. If the employees having same learning style are under single training group the group communication and the performance will be appreciable. Training need analysis is easier by understanding the learning capacity of the organization. In IT sector learning the process forms the basis of framing objectives and working towards the achievement of objectives. MBO (Management by Objectives) is the current appraisal method followed in various organizations which first makes the employees to learn and understand the process and the expected performance is set and the actual performance is calculated in comparison with the expected performance thus learning efficiency forms the basis of MBO.

Limitations

The study is best fitted only for analysis of employee learning styles working in IT/IT es sector and learning style analysis and inventory can be made for the employees inon-job training because it is difficult to analyze the learning style of new employee in induction training.

Thus learning style analysis of the employees has various applications and improves organizational efficiency.

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