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# IDEAS OF INNOVATION IN LEARNING STYLES OF HIGHER EDUCATION LEARNERS

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***Abstract:***

*Learning, creativity, and innovation are considered as the axis of the activities of all educational and entrepreneur based institutions. Learning style of students as one of the factors effective in learning and academic progress has always been taken into consideration. By identifying the learning style and rate of creativity of individuals, each style can be a more appropriate teaching method adopted by teachers and also a more correct method of learning by learners. Accordingly, the main goal of the present article is to identify the differences in learning styles of individuals in different academic majors and the rate of the creativity of individuals in each learning style. One of the main preoccupations of educational system is to transfer knowledge to the future generation. Increasing production of knowledge and information; extensive cultural, social, and economic development and changes along with new problems and consequently new expectations for educational system have resulted in teaching the manner of learning and methods of creativity and innovation instead of the transfer of a collection of knowledge and information to individuals. In the present age, students should apply creative thoughts, skills and correct learning methods to make appropriate decisions and solve the problems of society to cope with changes. This research article therefore intends to ideas of innovation for learners in each of the styles in addition to determining the learning style of each of the educational groups (experimental sciences, mathematics, and humanities) and inform the educational programmers of better teaching methods at the beginning of the academic year so as to help them to have access to more qualified strategies for the acquisition of science and knowledge.*

***Keywords:*** *Innovation, Learning Style, Higher Education, Learners, Effective Educational System,*

## Introduction:

Higher education is about knowing more and more about less and less. In fact, by providing manpower for many areas of production, planning, management and technological development, it influences practically every important national activity. According to Ronald Barnett (1992) there are four predominant concepts of higher education:

Higher education as the production of qualified human resources.

Higher education as training for a research career.

Higher education as the efficient management of teaching provision.

Higher education as a matter of extending life chances.

The procedure by which students grasp and undertaking the information and details of content is as special and unique as the individual learner. A group of characteristic, conduct, performance and perspectives are used to recognize Learning Styles and alternatives to make easier learning. The total learning which an individual learns is straight linked to the amount to which the educational experience is adapted with regard to his/her Learning Style. On the basis of model of individualization, Learning Style re-emerged in the 1970s, and has attained concern and vogue in the recent years. Learning Style often has more conceptualization contradiction and challenging disapprovals alike the several conceptual definitions of the term learning (Armstrong & Rayner, 2002; Rayner, 2007). Various conceptual views have been announced for explaining the broad word of ways of learning:

While in the complete agreement opted (Armstrong & et al. 2012) that Learning Styles are students' favored manners of answering in both cognitively and behaviorally to learning activities which modify depending on the atmosphere or condition and influence a students' inspiration and views to learning and frame students' execution. (Logan, K. & Thomas, P. 2002) found that in Honey & Mumford's Learning Styles questionnaire, males were less pragmatic than females were declared that there is no clear differences between genders in Grasha-Reichmann Learning Styles scales. Study also indicated to have a greater preference for the collaborative and independent styles. (Barmeyer, C. I. 2004) found that boy students indicated assimilating way of learning and girl students represented diverging way of learning. (Dzakiria, et al. 2004) explained that the preferences of distance teacher trainees need to be examined by which instructional designers become more responsive when designing the training materials by knowing the needs and Learning Styles of trainees. (Erica A. Wehrwein, et al. 2006) presented boys learner better liked multimodal modality, while girl students showed single-modality with a liking toward (Kinesthetic. Mupinga, et al. 2006) showed that mostly students were Introvert, Sensor, Thinker and Judger and least number of students was Extrovert and Intuit. Not a single specific ways of learning were found to be chief within the online students. (Kia, M. M., Aliapour, A. & Ghaderi, E. 2009) showed that verbal style and solitary style had the highest mean among male students whereas aural verbal Learning Style had the highest mean among female students. (Dobson, J. L. 2010) indicated that male have a superior propensity to better liked Read-write and Kinesthetic ways of learning above Verbal and Auditory ways of learning, while female students inclined to have approximately same better likings towards multi-modalities.

**Learning Style:**

The procedure by which students grasp and undertaking the information and details of content is as special and unique as the individual learner. A group of characteristic, conduct, performance and perspectives are used to recognize Learning Styles and alternatives to make easier learning. The total learning which an individual learns is straight linked to the amount to which the educational experience is adapted with regard to his/her Learning Style. The study of Learning Styles has modified over period of time and pursues to develop gradually as more as explored. The study of Learning Styles decreased about 50 years before revealing in the 1950s. The Learning Style concepts, ideology and theorists also accepted and fixed its metaphysical belief to offer its theories of learning with special preferences like Dunn and Dunn favored the environmental factors to the physiological Learning Styles while Grasha Riechmann indicated the outer factors as the biggest favorable environment to education. On the basis of model of individualization, Learning Style re-emerged in the 1970s, and has attained concern and vogue in the recent years. Learning Style often has more conceptualization contradiction and challenging disapprovals alike the several conceptual definitions of the term learning (Armstrong & Rayner, 2002; Rayner, 2007). Various conceptual views have been announced for explaining the broad word of ways of learning:

- Keefe (1979) explained that Learning Style as features of the cognitive, affective, and physiological operations that work like relatively strong measures by which students interpret, interact, and respond with all learning surroundings.
- Kolb (1985) defined Learning Style, that how students interpret and operate the information.
- Dunn (1990) designed Learning Style like the manner any learner starts to operate, and retain new and tough details of content and concentrating on outer stimulus.
- Honey and Mumford (1992) described it like an explanation of the views and behaviors which decided each learner's favored manner of learning.
- Felder (1996) saw Learning Style just as characteristics and strongest preferences in the way students' draw and process information.
- Loo (2002) saw Learning Style as the compatible method by which a student answers with stimuli in the studying conditions.

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Almost every Learning Style models are unanimous about Learning Styles that favored manners of learning. Frequently Learning Style regarded as active term that was suggested as physiological, social, interactive, and content feature preferences (Kolb, 1971; Grasha & Riechmann,

1975; Dunn & Price, 1989; Grasha, 2002). In addition to acquisition of knowledge, information processing, skill, remembrance, thinking and biological factors are the vital features of the term Learning Style. various theories and models of Learning Style have been emerged and applied in the literature over the last years to know the Learning Style better likings of students in addition to their executers e.g. Kolb, 1984; Honey and Mumford, 1986; Felder and Silverman, 1988; Fleming and Mills, 1992; Felder, 1993; Grasha, 1996).

Thus, just because Learning procedures diversify from one learner to another learner because of the presence of cognitive, affective, psychomotor, biological and psychological differences it can be stated briefly that ways of learning adopts the particular individualized academic abilities of reading, listening, writing, coding, operations of thinking, efforts and mistakes, revision and approach of quickly operations and utilizing information effectively in addition to learner's typical mode of new positively thinking, easy way of remembering longer and problem solving by recollecting their stored data. Learning Styles are adopted depending on their course content and learning surroundings so it is not fixed and may have a one style or group of Learning Styles or multimodal Learning Styles by the way learning becomes more effective according to different ways (no inferior to another) and at different levels.

Learning Styles are consequence of learning theories additionally educational theories at huge level. These styles are always explained with regarding to the review of learning theories. Scientifically, there are several theories of Learning Styles developed by the psychologists and educationists. It is necessary to explain in the brief of the all reviewed related to the study and more Learning Styles inventories, questionnaire and theories by researcher, which would be a directing principle of the discriminating reviews. Furthermore these all are mentioned.

- **Learning Style- Theories and Instruments**
- **David Kolb** developed an **experiential learning theory** and published a Learning Style inventory in 1984 to describe the way of learner's understanding (as concrete experiences/feeling or abstract conceptualization/thinking), and processing the information (as active experiments/doing or reflection observations/watching. Later on Learning Styles are classified as the dimensions of diverging, converging, assimilating, and accommodating. **Diverging**: In this type of Learning Style students prefer feel and watch, prefer groups, strong in imagination, emotions and in arts in addition to different cultures. **Assimilating**: students prefer in this Learning Style thinking and watching, abstract concepts, and generally care about being logical than groups of people. **Converging**: In this Learning Style students prefer thinking and doing in finding a solution through a practical idea or theory more technical than social activities, involves and applies experimentation with new ideas. **Accommodating**: students prefer in this Learning Style feeling and doing, valuing their

instincts to find out the exact solutions, and getting boost with plans and daily problems.

- In 1986 **Honey and Mumford** evolved **Learning Style Questionnaire** (LSQ) with more accuracy in validness and predictions than Kolb's LSI. This LSQ explains 4 different types of learning approaches in students: **Activists** learn by doing via fully involving with open mind than bias and experiencing, prefer learning approaches like brainstorming, sessions of problem solving and puzzles solving, discussion and competitions in groups, role-play etc. **Reflectors** prefer to learn from reflective observation by watching people and thinking, like the session of paired discussions and observations, questionnaires of self-analysis and personality, time out, feedback and coaching from others, interviews etc., **Theorists** learn from exploring associations and interrelationships, their learning approaches include following models, facts and statistics, reading stories and quotes, background information, applying concepts theoretically and analysis and synthesis etc., and **Pragmatics** learn from doing or trying put the things with practical outcomes, experimenting, speculations and methods to check out their medium of action prefer taking time to think, learning in reality, working with case studies, sessions of problem solving and discussion.
- **Felder and Silverman** in 1988 invented a Learning Style model classified in four dimensions of learning preferences which are **active/reflective** active students like to active experimentation in the real life. Reflective students prefer with inward-looking testing and working on information. **Sensing/intuitive** in sensing learner like to learn through senses by experiments, problem solving etc. intuitive students prefers to creating, struggling to know latest meanings and symbols etc. **visual/verbal** visual students like the approach of visualization with charts, diagram, pictures etc. verbal students like to involvement of both hear and speak in learning and learns best with conversation and clarification etc. **Sequential/global** in sequential learner learns in the process of linear, or in short steps, in order from etc. global learner like to learn in big steps, comprehensive thinking etc.
- **Grasha-Reichmann Learning Style Scales** (GRSLSS) constructed in 1974 via Grasha and Sheryl Reichmann to decide students' point of view about learning, activities, teachers, and peers within classroom environment. Scales consisting six Learning Styles of students which are **Competitive** students take information to perform and compete better than others and prefer to be a leader in session of group discussions, processing to teacher centric instruction and activities in class etc. **Collaborative** students learn by sharing ideas and talents with teacher, peers and others in addition to prefer Lectures, discussions, seminars, Group projects etc. **Avoidant** No enthusiasm in taking information, attendance, no participation with others, uninterested, prefer no tests, no activities, no enthusiastic teachers etc. **Participant** good learner, enjoy in class and accept duty to get the highest in course, take much part in course

activity prefer lectures, discussion, assignments and instructors those can analyses and combination course material very nice. **Dependent** students learn only needed, show less intellectuality, curiosity and see to officials data for particular guideline choice overview or notes on the board, fine guidelines for assignments, instructor centric instructional techniques etc. **Independent** students those believe for themselves and better liked to do self but listen to the thoughts of others, learn the important material and believe in academic capacities prefer independent assignments learning, better liked to work single, own-paced instruction, design projects etc.

- In 1987, **Fleming** designed a **VARK** Learning Styles model to help persons to know clear about their learning preferences which are referred and identified as **Visual** learning big preferences in applying maps, diagrams, charts, graphs, symbols, circles, hierarchies, designs, whitespace, patterns, shapes and the different devices and formats to call attention and carry material and information. **Aural / Auditory** learning students highly prefer taking lectures, session of mass conversation, radio, email, mobile, phones, speaking-hearing, web-chat and talking out loud as well as oneself etc. **Read/write** learning students strongly prefer textual input and output, reading and writing particularly manuals, reports, essays and assignments, PowerPoint, the Internet, lists, diaries, dictionaries, wordbook, quotes, words, GOOGLE and Wikipedia and others have an auditory presentation. **Kinesthetic** learning people greatly prefer to learn from the doing and experiencing in real as concrete personal experiences, examples, practice, simulation, demonstrations, videos and movies of reality bases, case studies, practice and applications etc. which all are grasped, held, tasted, or felt.
- **Reid's** Perceptual Learning Style Preference Questionnaire (PLSPQ) developed in 1987 defined Learning Styles based on perceptual preferences. These are **Visual** Learning Style prefer to learn and understand information and instructions thoroughly from watching terms in books, on the board, and in workbooks, learn alone, take notes from lectures, pictures, images and graphs etc. **Auditory** Learning Styles prefer hearing words, reading loud, hearing audiotapes, lectures, and class conversations and needed to express verbally when learns. **Kinesthetic** Learning Styles prefer experience and doing by involved physically and actively in activities, field trips, and role-playing, audiotape combined with an activity, drama, moving around. **Tactile** Learning Style prefer to do hands-on experiments in a laboratory, touching, working and experiencing materials, handling and building models, physical involvement and others in learning activities. **Group** learning in this style preference is work with others, group interaction and participation in group activities in learning and understanding new information and knowledge. **Individual** learning prefer learn best in alone by self-pace and independently. **Minor** learning describes several ways where individual can work thoroughly like a successful

student. **Negligible** learning describes students' learning harder in which way and its answers may be to straight studying in prefer ways and function on few of the expertise to stronger way of studying in field of negligible.

- **Anthony F. Gregorc** in 1984 designed a **Mind Styles Model** to explain and categorize the ways of thinking, learning, perceiving and processing information as perceptions duality (concrete and abstract) and ordering duality (sequential and random). In concrete perceptions individuals' process information with their five senses and in abstract perceptions individuals' process unseen plans, merits, and conceptual information. In reference to ordering dualities, in sequential ordering individuals arrange the information in a straight and reasoning way and in random ordering individuals arrange the information in chunks and in no specific order. Both of the perceptual and orderly dualities are found in every individual, but some are more dominant than others.

**Innovative Ideas for Faculties:**

- It has been recommended that faculties should adopt collaborative and assimilated teaching and learning techniques to help students for achieving the objective of program, acquiring skills of professional development, preparing them as analytical viewer, rational investigator, lifelong continue students, competent in peer- and self-evaluation and making the academic experience more productive and satisfying.
- Faculties should organize program-joining discussion; counseling and distributing a Learning Style inventory to find out students Learning Style preferences for assisting them to lead to modified learning, to make more knowledgeable options in study materials that enhance the opportunities for better achievement and effectively completion of their program.
- It has been recommended that faculties should draw attention that knowledge of students Learning Style preferences is the starting point of an educational dialogue, not a measure of students' personality. Furthermore, misapplication should not be done with results received from Learning Style inventories that may generate to stereotyped and biased classification of students. It should create understanding that Learning Style develop along with students' personal, educational and professional surroundings.
- Faculties should help students to develop required techniques/styles for adapting and shifting to varying conditions and because of real-life surroundings restrictions particularly when their preferred Learning Styles do not correlate with learning activity and not always the right style to learn.

**Innovative Ideas for Higher Education Institutions:**

- For the development of the Higher Education system it must be reinforced and resources full.
- For thoroughly spreading awareness in surroundings towards Higher Education system to

laymen and desirable students it must be attractively and clearly advertised and publicized through multimedia, both offline and online stream.

- For avoiding doubtfulness, inconvenience and unsupportiveness, proper awareness and information regarding the Higher Education can be achieved if the head of institutions/centers organize a group guidance programme and open question answer session regarding their course/program before candidate get enrolled.
- Honestly efforts must be done towards the maintaining the standardization and identification of Higher Education system so that it equally represent itself before face to face mode of education.
- There should be not allowed to anyone for any type of discrimination doing with the Higher Education students either in the employment opportunity or any eligibility criteria before its counterparts for its best standardization.
- Personality development and skill development programs must be organized compulsory in every course of study for student's enrichment and also course enlargement.
- All type and level of course/program academic activities like seminars, workshops, symposium and all should be the part of program for student support in learning and participants must be reinforced for participation and gaining the opportunity.
- For the effectiveness and best result of the course/programs positive interaction, open sessions and continuous communication among students, faculties and staff should be necessary.
- Counselors must try their best to support and counsel students in learning and developing in their sector.
- Regional and study centers should be in proper active role to follow session calendar.
- Availability of online library and online study materials for enrolled may be students the best attempt.

**Aim of High Education: The Creation of Excellence:**

Firstly, for a stable society, it is essential with aims of higher education that young boys and girls should imbibe values and ideas prevalent in the world around them. Secondly, to be functional, people need to be 'placed' in a spatial, historical, socio-cultural and techno-economic perspectives. They have to acquire a base of useful knowledge which would enable them to participate productively in the world of work. Thirdly, in today's environment in which new knowledge is being generated at an unprecedented rate, it is essential that learners should develop the capacity and the interest to learn by themselves. Last, but not the least, to be joyful and creative, it is necessary that academic processes should not ignore the needs for developing the curiosity, spontaneity and the creativity essential not only for scientific and academic research but also for better understanding of

what goes on in the world of imagination and the recesses of the human mind. The aim of higher education is to enable society to make progress through an understanding of itself and its world: in short, to sustain a learning society. There are numerous ways in which we could classify and describe what we see as the main components of this aim, but, in the interests of clarity, we have summarized some broad purposes. They all overlap and interlink in important ways and are described in more detail below. The first relates specifically to the needs of individuals and the others to society's requirements. The main aims of HE should be:

To create prepared minds and human resources

To pursuit of excellence, happiness and well being

To inspire and enable individuals to develop their capabilities to the highest potential levels throughout life, so that they grow intellectually, are well-equipped for work, can contribute effectively to society and achieve personal fulfillment.

To increase knowledge and understanding for their own sake and to foster their application to the benefit of the economy and society.

To serve the needs of an adaptable, sustainable, knowledge -based economy at local, regional and national levels.

To play a major role in shaping a democratic, civilized, inclusive society.

**Conclusion:**

Finally, the present study summarized with findings that there are significant differences on Learning Style of students according to their demographic variable. From outcomes it can be concluded that real learning is individualized feature of a student and each student is in one or more characteristics varied from one to other. Both Similarity and dissimilarity sometime may occur but that is because of influence of many theories, models, inventories and instruments that develop to measure Learning Styles, and other related things. Having these results may assist and provide useful information in the improvement, progression and qualitative implementation of specific teaching-learning approaches in terms of gender, that would increase student motivation and learning by adapting study instruction to student requirements. For making effective study instructions, faculties require to broaden their range of demonstration styles to assist and create more favorable and effective learning surroundings for heterogeneous group of students. Grasha (1996) stated that students' learning styles are flexible and can be changed depending on their experience in the classroom. This would be best to instruct them their most tough concepts in their preferred style of learning and to explore them their simple concepts in a different style of learning. Dzakiria & et al. (2004) signified that instructional materials must be flexible, supportive of diversity and able to accommodating a huge range of learning styles of individuals with learning differences. This revelation encouraged to suggest minimize passive lectures and to construct a more problem-based

and effective curricular approaches and content of program. Study materials shouldn't just reflect of the instructors' style, but should be prepared for all students and all dimensions of learning styles. Utilization of active learning techniques guide Towards better learning, because such techniques integrates multiple Learning Styles, grow students' thinking and reasoning, and modify efficiencies like problem-solving and decision-making. Demonstrations, interactions, group learning practices, role-playing, reproduction, models, imitation, challenges, and games are active instructing techniques that can be applied to satisfy learning acquisition in a large number of students group. Additionally, because of the significant role of the audio-visual sense of human being, it's also very necessary to prepare adequate application of audio-visual study instructions such as photos, CD, images, models, diagrams and posters etc. for those students who do not reliance on lecture and aural senses only. Mupinga & et al. (2006) determined that design of online instructions and activities should be accommodated according to multiple learning styles. The findings also proved in the process of learning age and marital status of a student does not play notable role.

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