Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.9, No.8, 2018

Learn Your Learner; Assess Later: Addressing Individual Learner Differences in a Writing Class

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Abstract
We all have a way in which we best learn. Likewise every student in our class has a different preferred learning style, which can make it difficult for us to be the most effective teacher especially in a writing course. However, by trying to find out the learners' differences and incorporating various methods into our teaching, we may be able to reach the majority of our students and can yield optimum result in our writing class. In the different studies of learner characteristics in applied linguistics, learning attitudes, strategies and motivation have received most attention. These learner individual difference variables have usually been seen as background learner variables that modify and personalize the overall trajectory of the language acquisition processes (Dörnyei, 2009). This paper, thus, sheds light on different types of learners based on their learning strategies that define students' preferences and guide a teacher to design her/his lesson. This is very important for a heterogeneous class for any kind of mismatches between the teaching style of a teacher and the students' learning styles, we will not be able to attain the objective of a course that might result in a demotivated class and the extreme consequence might be the increase in the drop outs from the university.
Keywords: Multiple Intelligences, Learning Styles, Learning Strategies, Individual Learner Differences

1. Introduction

The theory of multiple intelligences (MI), developed in 1983 by Howard Gardner, follows the constructivist model of learning, suggesting that learners possess several types of intelligences which they use to process and interpret information. That is to say that we all have a way in which we best learn. Likewise, every student in our class has a different preferred learning style, which can make it difficult for us to be the most effective teacher especially in a writing course. However, by trying to find out the learners' differences and incorporating various methods and/or tools into our teaching, we may be able to reach the majority of our students and can yield optimum result in our writing class. In the different studies of learner characteristics in applied linguistics, learning attitudes, strategies and motivation have received most attention. These learner individual difference variables have usually been seen as background learner variables that modify and personalize the overall trajectory of the language acquisition processes (Dörnyei, 2009). This paper, thus, sheds light on different types of learners based on their learning strategies that define students' preferences and guide a teacher to design her/his lesson. This is very important for a heterogeneous class for when mismatches exist between the learning styles of most students in a class and the teaching style of a teacher, the students may become bored and inattentive in class, do poorly on tests, get discouraged about the writing class, the curriculum, and themselves, and in some cases eventually change to other curricula or drop out of the university.

2. Learner Differences: Learning Styles and Strategies

Learning-related performance is affected by a number of learning-related concepts, such as perception of academic control and achievement motivation (Cassidy & Eachus, 2000). Learning style is the one that has provided some valuable insights into learning in both academic and other settings. The terms "learning style", "cognitive style" and "learning strategy" are frequently used 'imprecisely' in theoretical and empirical accounts of the topic (Cassidy, 2004). The terms learning style and cognitive style are sometimes interchangeably used whereas in some cases they are referred to separate and distinct definitions. Allport (1937) defines cognitive style as an individual's typical or habitual mode of problem solving, thinking, perceiving and remembering, while the term learning style is adopted to reflect a concern with the application of cognitive style in a learning situation (Riding & Cheema. 1991). Riding and Cheema (1991) also describe cognitive style in terms of bipolar dimension (holistic-analytic) while learning style is seen as encompassing a number of components which are not mutually exclusive. Hartley (1998) provides the following definition: "cognitive styles are the ways in which different individuals characteristically approach different cognitive tasks; learning styles are the ways in which different individuals characteristically approach different learning tasks". Hartley (1998) also defines learning strategy as the strategies the learners take on when learning. He further adds: "different strategies can be selected by learners to deal with different tasks. Learning styles might be more automatic than learning strategies which are optional" (Hartley (1998: 149).

A learning style, thus, is a learner's consistent way of responding to and using stimuli in the context of learning. Educationalists introduced the concept of learning style as a "description of the attitudes and behaviors that determine our preferred way of learning" (Honey, 2001). Keefe (1979) defines learning styles as the

"composite of characteristic cognitive, affective, and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with, and responds to the learning environment". Stewart and Felicetti (1992) define learning styles as those "educational conditions under which a student is most likely to learn". Thus, learning styles are not primarily concerned with WHAT learners learn, but rather HOW they prefer to learn.

There are many reasons why an individual learner's learning style and strategy should be taken into account before planning for a writing class (or lesson). First of all this ensures the teaching-learning process an 'interactive, cooperative, relational aspects of teaching and learning' (Tiberius, 1986). An EFL class should no longer be delivery-oriented focusing on the passing out of information but rather should comprise of 'active learning' techniques that truly engage the learners in the teaching-learning process. Secondly this addresses to the more diverse student body in a classroom (whether large or small). The diversity is not only in case of learning styles but also in case of age, nationality, cultural background, academic background etc. Moreover, to convey the message of a lesson (or a session) taking into consideration of the learners' differences is also important. 'Despite our good intention, we may be so concerned with covering the subject matter that we lose track of how much of that material really gets conveyed through our taken-for-granted teaching modes' (Montogomery and Groat, 1998). For example, in a typical 50-minute class, students retain 70% of what is conveyed in the first 10 minutes but only 20% from the last 10 minutes (McKeachie, 1994, p. 56). If the objective of the class is to make the learners involved with the task(s) the multi-faceted way of approaching is the only way of doing it across the range of student learning styles. This will also make the teaching rewarding enhancing the student-participation and also caters the fact that teaching L2 requires self-reflection about our teaching practices that might require to be evolved as per classroom context.

3. Models of Learning Styles

The preferred way in which an individual learner approaches a task and/or learning situation, i.e. their learning style or approach or strategy, has been characterized in several different ways based on a variety of different theoretical models (Appendix 1). In this paper four of the models will be discussed.

3.1 Myers-Briggs Type Indicator™

Myers-Briggs Type Indicator™ is one of the well-known instruments for identifying personality types for learning styles. This has been developed by Isabel Myers and Katherine Cooks Briggs, the inventory is based on Carl Jung's concept of archetypes (McCaulley et al., 1983; Myers & McCaulley, 1986). This model highlights that an individual's personality profile is identified along four dimensions: orientation to life (Extroverted/Introverted); perception (Sensing/Intuitive); decision making (Thinking/Feeling); and attitude to the outside world (Judgement/Perception). This Myers-Briggs Type IndicatorTM has been widely implemented in order to classify learners in various disciplines (McCaulley et al., 1983; Schroder, 1993). The chart (chart 1) (cited from Montogomery and Groat, 1998) shows the preferences of Myers-Briggs personality types.

However, it is not realistic to expect that a teacher can develop different ways of teaching to address individual learner in her/his class. But we can adopt a methodology that can relate to different learning styles. For example, in a very elementary writing course (or class) the teacher can include a very simple and familiar excerpt so that an introverted and thinking learner can work alone on it and can form her/his own concepts and ideas and write them in objective and logical manner. An ideal lesson should focus not only an introverted and thinking learner but also gradually include a combination of individual and group work, and thus not relying solely on any one particular mode but should rather offer something for all personality type.

3.2 Kolb/McCarthy Learning Cycle

Kolb's observation of the misery encountered by many learners whose learning styles seemed mismatched to their disciplinary majors (Kolb, 1981) has been the driving force in the development of the Kolb/McCarthy learning cycle model. This model is based on the theory that all the learning encompasses a cycle of four learning modes, but each individual is likely to feel most comfortable in one of the four models of the cycle based on her/his preference along two dimensions: Perception and Processing (Kolb, 1984, 1995; Harb et al., 1995). Perception and Processing in fact reflect the major directions of cognitive development derived from the work of Piaget (1970). The four learning cycles in the Kolb model are also distinguished by the type of question that concerns each category: "Why?", "What?", "How?", and "What if?" (Montogomery and Groat, 1998). Using this, each academic field can be mapped against this same set of dichotomous dimensions according to what type of learning mode predominates in that discipline. The diagram (diagram 1) summarizes the learning styles and learning cycle based on Kolb's Model (cited from Montogomery and Groat, 1998). Too much indulgence on any one of the quadrant, however, may bring forth the gap in capabilities among the learners; for e.g. one aspect of Kolb's research demonstrated that over time science students become more analytical and less creative, while arts students become more creative and less analytical. Montogomery and Groat, (1998)

suggested some activities (chart 2) that can be corresponded to each of these leaning styles.

This might prove to be an ideal model for teaching writing if the instructor follows each cycle in order and starting as an 'expert' and ending as a 'motivator' for the learners. The 'questions' also give the learner a more concrete platform of learning giving a rationale for each task that they can relate to the real-world activity.

3.3 Felder-Silverman Learning Styles Model

This learning style model has been developed by Richard Felder and Linda Silverman (Felder, 1993; Felder and Silverman, 1988). This model has five dimensions two of which bear a similarity with the aspects of Myers-Briggs and Kolb model. The Perception dimension (sensing/intuitive) in fact is akin to the Perception of both Myers-Briggs and Kolb model. The three additional dimensions advocated by Felder-Silverman are: Input (visual/verbal), Organization (inductive/deductive), and Understanding (sequential/global). The chart (chart 3) summarizes the learning styles as presented by the Felder-Silverman Learning Style Model (cited from Montogomery and Groat, 1998). It is a proven fact that a writer who can correlate and adapt to different situation turns out to be a good writer. So, a teacher should be teaching to a sufficient diversity of learner learning styles to encourage motivation in performing writing tasks. In accommodating different learning styles, Felder advocates a balance between the extremes in each learning dimensions. Thus, contextualizing a lesson, balancing concepts with demonstrations and examples that might include pictures and images and concretizing the objective of a lesson that caters to both learner active participation and reflection can enhance the output of a writing class.

3.4 Grasha-Riechmann Learning Styles

Anthony Grasha and Sheryl Hruska-Riechmann developed the learning styles typology in 1974 based on the learners' responses to actual classroom activities rather than on a more general assessment of personality or cognitive traits. This more specific and situation oriented typology is more focused and relevant and thus more reliable and valid. Personality based learning style typology requires a teacher to accommodate a particular learning style into a classroom setting and design a lesson whereas the Grasha-Riechmann typology is designed to help a teacher to identify teaching techniques to address particular learning styles. The chart (chart 4) summarizes the characteristics of each style and also upholds equivalent preferences in classroom setting (cited from Montogomery and Groat, 1998). In the Grasha-Riechmann typology it is evident that it does not assume the bipolarity of the scales. Among the six styles of learning, only the Participant/Avoidant types represent a clear dichotomy. Grasha originally hypothesized the other four styles as dichotomous, in the following way: Competitive/Collaborative and Dependent/Independent. But the dichotomy of these styles was not borne out. Over the years, Grasha and other researchers have investigated the correlation of this learning style typology to other demographic characteristics. In contrast to Kolb's findings, Grasha has not found any consistent relationship between academic major and his learning style typology. On the other hand, his research has demonstrated some consistent variations due to gender, student age and grade (Grasha, 1996).

Another distinguishing feature of Grasha-Riechmann style is that Grasha has also developed a corresponding typology of teaching styles, similarly based on actual classroom setting. The chart (chart 5) summarizes four basic chunks of compatible learning and teaching styles (cited from Montogomery and Groat, 1998).

Grasha, however, does not indicate that all learning style preferences to be accommodated at all times. But rather he suggests that the very knowledge of these learning styles can facilitate a teacher into augmenting their pedagogical preferences to a more practical teaching methodology. For example, for a more collaborative group, a teacher may design her/his writing task that might include a brief group discussion followed by a group work (brainstorming, jotting ideas, forming supporting details etc.).

4. Learner Types

According to Gardner's MI theory the learners can be classified into the following categories:

1. Verbal-Linguistic
2. Logical-Mathematical
3. Spatial-Visual
4. Bodily-Kinesthetic
5. Musical
6. Interpersonal
7. Intrapersonal
8. Naturalist
9. Existentialist

The **verbal-linguistic** learners rely upon reading, writing and speaking as their dominant domain of learning. This type of learner prefers literature, discussions, debates, creative writings, stories and speaking

activities. The **logical-mathematical** learners feel comfortable in using numbers and logic to understand various patterns. This type of learners has the capability to think conceptually and abstractly. So, they can formulate an idea before expressing it in pen and paper. The **spatial-visual** learners are influenced by visuals such as shapes, patterns and designs. They can visualize, imagine and pretend. For this type role play and demonstration work best in a classroom. The **bodily-kinesthetic** learners prefer learning by doing. They are more active than reflective. Discussion or demonstration does not work for them. They learn in project work and through active participation in a class. Too much lecture or task that requires a longer period of 'sitting' easily distract them and make them demotivated. The **musical** learners have the ability to recognize sound, tones and beats. Listening comprehension works best with them. They are able to use inductive and deductive reasoning and can establish relationship among various data. The interpersonal learners are interactive and learn through interaction. This 'social' type of learners learns best through discussions, cooperative works or social activities. They are also able to create a synergy in a classroom by being aware of the feelings and motives of others. The **intrapersonal** learners are mainly reflective learners. They learn effectively through metacognitive practices such as getting in touch with their feelings and self-motivation. They can concentrate and learn through writing, diagramming or recording their ideas. They are good at setting and pursuing goals and assessing their works. The **naturalist** learners deal with the natural environment. They are more prone to collecting field information and prefer searching a topic on different search engines and prepare a project accordingly. This type of learners does better in different outdoor activities and field trips. They are more observer and adaptive and can see the subtle meanings and patterns in nature and the world around them. The **existentialist** learners prefer philosophical exchanges and are interested in the writings of different philosophers. Thus, these learners learn best through seeing the 'big picture' of human existence by asking philosophical questions about the world.

5. Technology and Techniques to Maximize the Output in an EFL Writing Class

The MI theory is very helpful for effective merging of learning styles and teaching methodology, especially in writing class. To get maximum result, technology becomes a powerful tool in education if we synthesize it with this learning theory in a thoughtful and purposeful way in our classroom. The first hurdle is to identify the individual learning style. For that the survey/self-assessment from the site http://www.edutopia.org/multiple-intelligences-learning-styles-quiz can be a very significant step. Through this website a learner can identify the domain of her/his own learning style preference. Likewise, teachers can also differentiate the instructions making adjustments in the lesson plans in order to meet the individual needs and learning styles of the students. For this the teachers need to know and understand the learning style preferences of each of the students in the class; they must also know which tools are most effective for different learning styles so that they can create opportunities for each learner to develop her/his particular strengths and succeed to her/his maximum potential. Possible tools that may enhance learning writing for each learner type:

1. Verbal-Linguistic: working with poems, myths, legends, story-making/telling, interviews, scripting etc.
2. Logical-Mathematical: writing projects that require strategic, logical and critical thinking
3. Spatial-Visual: generating write-ups from picture strips, comics, describing graphs and charts, flow-diagrams etc.
4. Bodily-Kinesthetic: report writing based on a project work, field trip or role-play
5. Musical: writing based on listening comprehension, opinion paper on some sound or music files etc.
6. Interpersonal: email projects, blogs, collaborative writing tasks
7. Intrapersonal: writing diaries, journal, book/story review etc.
8. Naturalist: report writing on field trips, geo-project presentation etc.
9. Existentialist: focused discussions/writings on selected topics, opinion writing on selected extracts etc.

To address multiple intelligences, 'Project Based Learning (PBL)' implemented through Webquest can be a very effective tool (Akhand, 2015). A webquest is an inquiry-based activity that uses links to essential resources on the internet and an authentic learning task to motivate students to investigate of a series of central, open ended questions (March, T. 2000). A well designed webquest uses the power of the internet and a scaffolding learning process to turn research based theories into learning centered practices. In this process, the learners undertake a task that requires a formidable amount of reading and/or discussion, on the basis of which the learners prepare a paper as a part of their course assignment. A teacher can design a project based on the topic, for example, "Planning an Annual Class Trip". Learners can be divided into groups so that each group is composed of different-style learners. Each one of the groups will have a specified share in the task. For instance, if they are supposed to submit a project report and present the report as an interactive power point presentation in the end, the webquest may contain hyperlink(s) that will take the class to important website(s) that might offer a corpus of sample writings from which the learners may choose their model(s). After that – the **verbal-linguistic learners group** might take care of correct report writing (sentence structure, vocabulary, style etc.); the **logical-mathematical learners group** might look up for statistical data that can help in making decisions (like where to go, where to stay, where to eat etc.); the **spatial-visual learners group** might work to provide nice photos and

relevant illustrations and might work for the visual layout of the presentation; the **bodily-kinesthetic learners group** might perform the typing of the report and may make some audio and video recordings with a camera (interviewing people who already visited the place and then write their opinion about it); the **musical learners group** might add some sounds or music file to the power point presentation and might also work on using some audio recording during the trip ; the **interpersonal learners group** might organize a forum and exchange information with others ; the **intrapersonal learners group** might help in gathering useful resources (perhaps from the internet) about the destination and the trip and might write a detailed plan for the journey; the **naturalist learners group** might search the important topics and make an inventory of the 'frequently asked questions' and provide answers to them by collecting necessary field data; and finally the **existentialist learners group** might contribute best in the classroom discussion and overall effects and strategies of the trip.

6. Conclusion

In our part of the world (South Asia), an EFL classroom size is very big and there are different types of learners in our classrooms. Inevitably, they bring to the classroom a great diversity of learning styles and strategies. The most important thing is to realize these learner differences so as to use the strategies to prepare a lesson that will address nearly all the learners in the classroom whatever the learning style is. It is, however, extremely important for a teacher to continually strive to find approaches and tools to reach as many of the learner styles as possible. In fact, it is all about providing balance in the classroom. We have to be careful not to deliver our lecture or to design a lesson the same way all the time, but rather incorporate a variety of tools and methods with the help of different technologies like MALL (Mobile Assisted Language Learning) that cater to a broad range of learning styles. Moreover, matching teaching style with the learning style is not a solution that solves all problems of an EFL class. As McKeachie (1995) puts forward, other factors like classroom environment, learners' background, motivation, gender and multicultural issues of course greatly influence the teaching/learning development of a classroom. As a matter of fact, there is no 'right way' to integrate the learner styles. The key is to avoid the fixity and to recognize the fluidity of the pedagogical approach and to provide the most effective learning environment to facilitate the learning.

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Appendix 1

Inventory of the Learning Style Models:

Leveler-sharpener: Holzman and Klein (1954)
Field-dependence/independence: Witkin (1962)
Type Indicator: Myers and Briggs (1962)
Impulsivity-reflexivity: Kagan (1965)
Verbalizer-visualizer: Pavio (1971)
Holist-serialist: Pask (1972)
Styles of learning interaction model: Grasha and Reichmann (1974)
Child rating form: Ramirez and Castenada (1974)
ELSIE: Reinert (1976)
Cognitive Style Interest Inventory: Hill (1976)
Conceptual level: Hunt, Butler, Noy and Rosser (1978)
Assimilator-explorer: Kauffmann (1979)
Learner types: Letteri (1980)
Style delineator: Gregorc (1982)
ELM: Kolb (1984)
Learning style profile: Keefe and Monks (1986)
Learning Styles Model: Felder and Silverman (1988)
LSI: Dunn, Dunn and Price (1989)
ILP: Schmeck et al. (1991)
LSQ: Honey and Mumford (1992)
Adaption-innovation: Kirton (1994)
LSI: Vermunt (1994)
Surface-deep: Entwistle and Tait (1995)
Intuition-analysis: Allinson and Hayes (1996)
SPQ: Biggs et al. (2001)

Appendix 2

ORIENTATION TO LIFE	**Extroverted** Group interaction Applications	**Introverted** Working alone Concepts and ideas
PERCEPTION	**Sensing** Facts and data Routine	**Intuitive** Impressions Not routine
DECISION MAKING	**Thinking** Objective Logical	**Feeling** Subjective Search for harmony
ATTITUDE TO OUTSDE WORLD	**Judgement** Planning Control	**Perception** Spontaneity Adaptive

Chart 1: Preferences of Myer-Briggs personality types

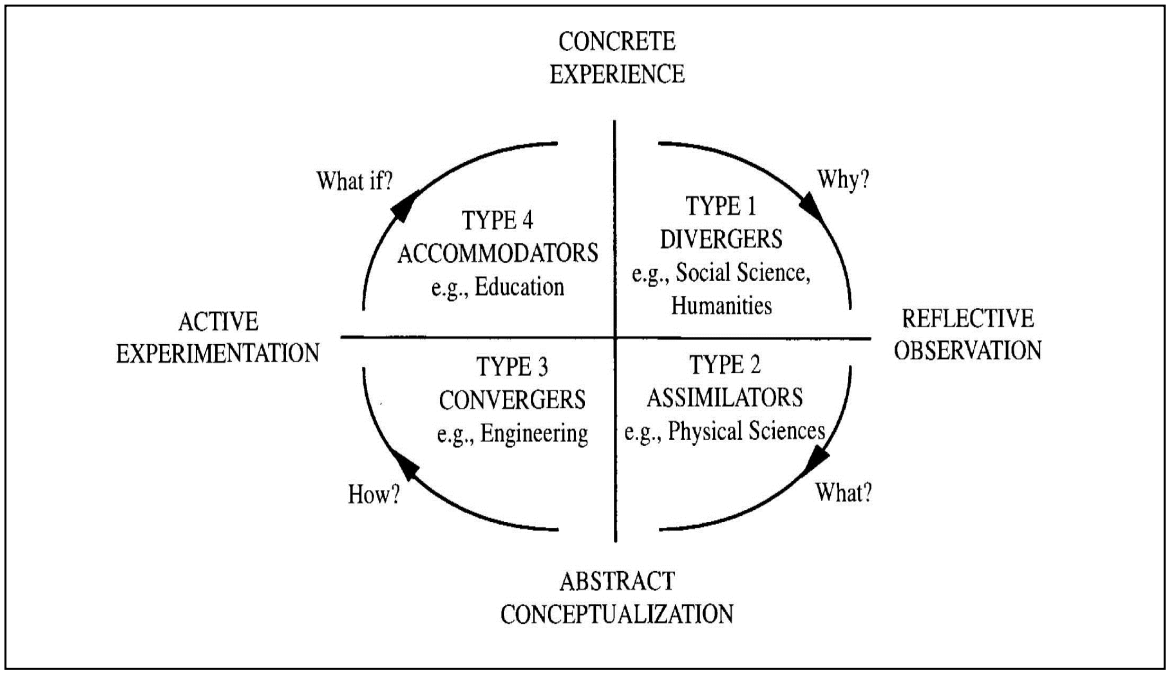

Diagram 1: Learning Styles and Learning Cycle based on Kolb's Model

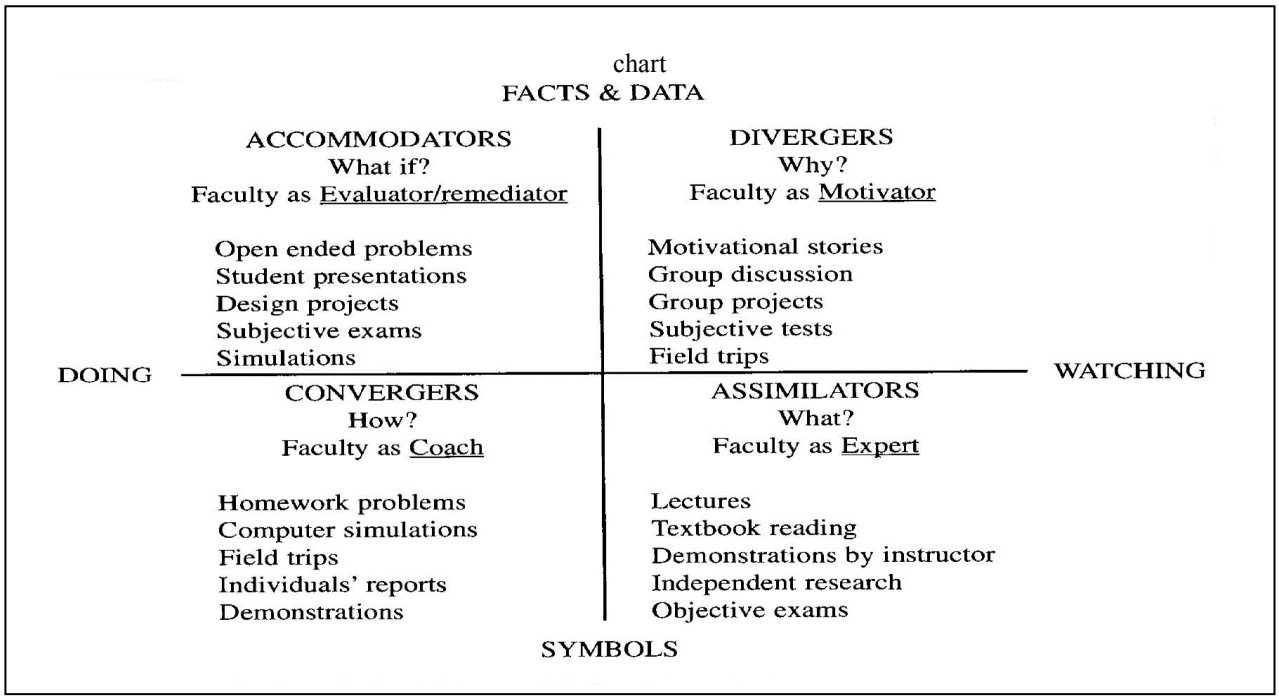

Chart 2: Activities corresponded to Kolb/McCarthy Learning Cycle

Dimensions	Range	
PERCEPTION	**Sensing** Data obtained via senses Facts and observations	**Intuitive** Symbols Interpretations
INPUT	**Visual** Charts and Pictures	**Verbal** Spoken word
ORGANIZATION	**Inductive** Facts and observations	**Deductive** General principles
PROCESSING	**Active** Doing something Group work	**Reflective** Introspective processing Independent work
UNDERSTANDING	**Sequential** Linear connections Small connected chunks	**Global** Holistic connections "Big picture"

Chart 3: Felder-Silverman Learning Style Model

Style	Characteristics	Classroom Preferences
Competitive	Compete with other students	Teacher-centered, class activities
Collaborative	Share ideas with others	Student-led small groups
Avoidant	Uninterested, non-participant	Anonymous environment
Participant	Eager to participate	Lectures with discussion
Dependent	Seek authority figure	Clear instructions, little ambiguity
Independent	Think for themselves	Independent study and projects

Chart 4: Characteristics and Classroom Preferences for Grasha-Riechmann Learning Styles

Chunk 1	**Chunk 2**
Primary Learning Styles Dependent/Participant/Competitive	***Primary Learning Styles*** Participant/Dependent/Competitive
Primary Teaching Styles Expert/Formal Authority ▪ Exams/Grades Emphasized ▪ Lectures ▪ Mini-Lectures + Triggers ▪ Teacher-Centred Questioning ▪ Term Papers ▪ Technology-Based Presentation	***Primary Teaching Styles*** Personal Model/Expert/Formal Authority ▪ Role Modeling by Illustration ✓ Sharing Thought Processes ✓ Sharing Personal Experiences ▪ Role Modeling by Direct Example ✓ Demonstrating Ways of Doing ▪ Teacher/Coaching/Guiding Students
Chunk 3	**Chunk 4**
Primary Learning Styles Collaborative/Participant/Independent	***Primary Learning Styles*** Independent/Collaborative/Participant
Primary Teaching Styles Facilitator/Personal Model/Expert ▪ Case Studies ▪ Guided Readings ▪ Key Statement Discussions ▪ Laboratory Projects ▪ Problem Based Learning ✓ Group Inquiry ✓ Guided Design ✓ Problem Based Tutorials ▪ Role Plays/Simulations ▪ Roundtable Discussions	***Primary Teaching Styles*** Delegator/Facilitator/Expert ▪ Helping Trios ▪ Independent Study/Research ▪ Jigsaw Groups ▪ Learning Pairs ▪ Practicum ▪ Small Group Work Teams ▪ Student Journals

Chart 5: Typology of Teaching Styles compatible to Grasha-Riechmann Style