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LEARNING STYLES: BE SURE TO READ THE LABEL

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Стилі навчання: теорії та практичний досвід

Стаття висвітлює деякі теоретичні концепції американських педагогів щодо стилів, форм та методів навчання, розроблених у 70-х роках минулого століття, які набули подальшого розвитку та є дуже актуальними на сучасному етапі.

Ключові слова: стилі навчання, стратегія, концепція, учень, вчитель.

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Стили обучения: теории и практический опыт

В статье анализируются некоторые теоретические концепции американских педагогов, разработанных в 70-е годы прошлого столетия, которые получили дальнейшее развитие и являются очень актуальными на современном этапе.

Ключевые слова: стили обучения, стратегия, концепция, ученик, учитель.

We can probably start off by agreeing that not much in the field of education will receive a 100 percent approval rating from all invested parties. That being said, ask any teacher, regardless of the level from primary school through higher education, and he or she can recount tales of students who have been unable to grasp the knowledge and information that the teacher was trying to transmit. This acknowledgement that there are various approaches or ways of learning led in the 1970s to the idea in America of individualized “learning styles.” Classroom methodology and instructional strategies even now continue to be based on identified learning styles. The problems arise with the plethora of names and definitions given to these learning styles, the ways to assess

learning styles, and the appropriate ways to adapt educational delivery methods once learning styles are acknowledged and identified.

Most in the field of education can recognize that all humans have specific ways of learning. The idea of learning styles proceeds on the basis that individuals are likely to "retain knowledge best when we are allowed to use our preferred learning style," according to the article "Kolb Learning Styles" [1, p.48]. David A. Kolb and his partner Roger Fry developed their learning styles inventory in 1976. Their argument was that all learners fall somewhere on two continuums: abstractness to concreteness and reflection to activity. This then led to four different learning modes: abstract conceptualization, which favors learning by thinking; active experimentation, which favors learning by doing; concrete experience, which favors learning by feeling; and reflective observation, which favors learning by reflecting, watching and listening [1].

As a result of a Learning Style Inventory, Kolb developed combinations or scores of the variables to come up with four types of learners. These are labeled: "accommodators, who learn best by concrete experience; assimilators, who learn by using deductive reasoning to create theoretical models from abstract concepts; convergers, who focus on specific problems and excel in the practical application of ideas; and divergers, who use imaginative ability in looking at concrete situations in different ways to develop ideas" [2, p.107].

Now the work of one theorist has resulted in several "labels" for learners. But it is not yet finished. All these categories based on Kolb's work then resulted in a model of four cycles or stages which follow each other. This process could happen quickly or take weeks or even months depending on the topic studied. These four stages would follow each other in this sequence: (1) concrete experience would lead to (2) reflection of the experience on a personal basis, which then would lead to general rules of the experience, followed by (3) abstract conceptualization when the learner sought ways to modify the experience, and then to (4) active experimentation. With the cycle complete, the next concrete experience would arise [3].

As if we do not already have enough labels, Kolb's model was adapted by Peter Honey and Alan Mumford in 1982 in "Typology of Learners." Now the four groups of learners received new names in a new cycle model: concrete experience became an "activist" or a learner who prefers doing and experiencing; reflective observers became "reflectors" who prefer to observe and reflect; abstract conceptualization became "theorist" or a learner who wants to understand underlying reasons, concepts, and relationships; and the active experimentation becomes the "pragmatist" or the one who likes to try things out and see if they work [3, p. 86].

We can add a bit more complexity to the issue with the recognition that learning styles can be associated with how the brain is used. We have all heard people explain their inability to grasp certain information with the rationale "I'm really a right brained person" or "I'm left brained." How does this fit into the concept of learning styles? Those writing in the area of brain research attribute various abilities to those dominant in one sphere or the other. For example, left brained people are said to be analytical and tend to remember names well. They use logic instead of emotion in answering test questions and prefer multiple choice tests. Right brained people, on the other hand, remember faces rather than names and prefer essays when taking tests. Another researcher maintains that right brained people tend to perceive spatial interactions better, while left brained people excel in language skills [2]. Thus, we add another layer to the problem of understanding learning styles since knowing and understanding if a person is more right or left brained can help determine what to teach and in what ways to go about teaching a specific subject.

Another approach to categorizing and understanding learning styles is based on work done by Anthony F. Gregorc. His work organized a way to consider how the mind works. His first research resulted in an Energetic Model of Styles in 1969 which was adapted to the Mind Styles Model in 1984. Gregorc divided the perceptual quality of the mind into concrete and abstract, and the ordering ability into sequential and random. Gregorc explained the concrete perceptual quality as the way one can register

information directly through the senses. There is no effort to look for hidden meanings or relationships between ideas or concepts. Abstract perception is the quality which allows one to visualize, conceive ideas, and understand or believe something which cannot be seen by using intuition or imagination. This kind of perception looks for more subtle implications. Using the sequential ordering ability allows an individual to organize information in linear or step-by-step manner. This is the traditional approach which is familiar in education. Random ordering lets the mind organize information in chunks in no particular order. An individual with this type of ordering ability might even be able to skip steps and still produce the desired results, such as in a mathematics problem [. ("Mind Styles – Anthony Gregorc")

By understanding these categories, Gregorc found that four different patterns emerged. No individual is a "pure" style, but rather each of us is a unique combination of styles. It is this combining which is of special interest to educators since they reveal hints about what such learners like, how they learn best, and what they find most difficult or challenging.

- For example, one category is called "concrete sequential". Students in this group like order and logical sequencing. They follow directions and appreciate predictability. They learn best in a structured environment where they can apply ideas in a pragmatic way. They are not fond of working in groups or having discussions without a specific point. They do not like being told to use their imagination in an assignment, nor do they like questions with no right or wrong answers.
- Students in the "concrete random" category, however, are risk takers who enjoy experimenting. They use their intuition and like solving problems independently. They learn best using trial and error. Although they learn best by themselves, they like to compete with others. They find it hard to deal with anything routine or restrictive. They want to have options; they dislike formal reports or keeping detailed records.
- "Abstract sequential" students want their points to be heard; they want to analyze information before acting; they want to apply logic. They learn best when they

have access to experts or references, but they prefer to work alone. They find it hard to be forced to work with other students who have differing views. They find it difficult to express their emotions or to cope with sentimental thinking. They also find it hard to be diplomatic with others who express different views, and they tend to monopolize the conversation.

- The final group, "abstract random", includes students who like to listen to others, who want to bring harmony to situations, who like to establish healthy relationships. They learn best when they are given broad, general guidelines. They relish group activities. What is difficult for them is explaining or justifying their feelings or working with authoritarian or dictatorial personalities. They have trouble concentrating on one thing at a time, and they have difficulty accepting even positive criticism [4].

Probably every teacher in the world can envision a classroom where these diverse personalities with their own preferences and dislikes cohabitated.

A very common way to categorize types of learning is based on the work of Neil Fleming in developing the VARK (visual, auditory, reading-text, kinesthetic) model. The model was originally developed as VAK, but in 1987 the visual aspect of learning was divided into "symbolic aspect" represented by "V" and "text aspect" represented by "R". The basic assumption is that every individual is predisposed to a preferred learning style. The use of this model in educational pedagogy allows teachers to prepare lessons which address this variety of areas. Despite a preference for one specific style, most students are able to process information which is not in their preferred style. Sometimes what they need to do is develop strategies to compensate when information is not in their particular style. For example, an auditory learner may fail to take meticulous notes in a class and will have to develop ways to talk through that information. A visual learner could also find it necessary to sit in an area opposite classroom windows so he or she will not be distracted by the outdoor scene [5].

Interesting work in the field of learning styles has also been conducted by Dr. Richard M. Felder at North Carolina State University and his colleague Barbara A. Soloman, who coordinates advising for first year students at the university. Felder has an entirely different set of labels for the various learning styles. His learning styles inventory would place learners on four different spectrums: active and reflective learners, sensing and intuitive learners, visual and verbal learners, and sequential and global learners. He makes distinctions in these pairings, but does point out that everybody is on both ends of the spectrum sometimes. A preference for one category or the other could be strong or mild. Ideally, an individual would have a balance between the two. Some general statements are made about the categories:

- Active learners tend to retain and understand information best by doing something active with it – discussing or applying it or explaining it to others. They tend to like group work.
- Reflective learners prefer to think about it quietly first and prefer to work alone.
- Sensing learners tend to like learning facts and solving problems by well-established methods. They tend to be good with details and doing hands-on laboratory work. They want course work to connect to the real world.
- Intuitive learners often prefer discovering possibilities and relationships; they like innovation and dislike repetition.
- Visual learners remember best what they see through pictures, diagrams, films, and demonstrations.
- Verbal learners get more out of words, both written and spoken explanations.
- Sequential learners tend to gain understanding in linear steps, with each step following logically from the previous one.

- Global learners tend to learn in large jumps, absorbing material almost randomly without seeing connections and then suddenly getting it. They have to grasp the big picture [6].

Once students have been placed on the spectrum or continuum, Felder suggests ways the learners can help themselves and compensate for the fact that educators might be presenting information not in the students' preferred styles. For example, if an active learner is in a class where there is little opportunity for discussion, he or she might want to compensate by forming a study group. Likewise, a reflective learner could be in a class where little time is given to think about the new information. That student might want to not limit himself to simply reading or memorizing material. Instead, he or she should periodically stop to review what has been read and think of possible questions or applications.

"The idea is not to teach each student exclusively according to his or her preferences, but rather to strive for a balance of instructional methods," according to a quote attributed to Felder. Obviously, it would be difficult for a teacher to incorporate every single person's learning style in a whole day's classes, but it is a good idea to mix up the lesson plans so that each day a person's learning style may be at least touched on. One problem at the university level is that many professors and instructors teach their classes by mainly focusing on a single learning style – most use the lecture method. Even when students are not taught in a way that coincides with the way they learn best, they can still succeed if students take the initiative to use their own learning style in their out of class study [2].

Research by Howard Gardner in the area of multiple intelligences also fits in the discussion of learning styles. In writing about Gardner's work, Mark K. Smith says that formerly people believed intelligence was a single entity that was inherited and humans could be trained to learn anything if it was presented in an appropriate way. By 1993, Gardner wrote that an increasing number of researchers believe the opposite is true: there exist multiple intelligences quite independent of each other [7]. One might ask how

this relates to the idea of learning styles. Mindy I. Kornhaber, a researcher with Project Zero doing research on arts education through Harvard University, contends that the theory "validates educators' everyday experience: students think and learn in many different ways." She goes on to say that "this reflection has led many educators to develop new approaches that might better meet the needs of the range of learners in their classrooms" [7]. Of course, Gardner has also been involved in Project Zero.

The seven intelligences or learning styles are well known. The first two have typically been valued in schools. Those with "linguistic intelligence" love to read, write, and tell stories. They are able to memorize information and can repeat back everything the teacher has told them, often word for word. "Logical-mathematical intelligence" is held by those who are mathematically inclined. This student might plague the teacher constantly with questions of how things work or how things relate to one another. This student learns best by categorizing or classifying information [7; 8]. Not all students have these intelligences which have traditionally been valued by educators. Three other intelligences are associated with arts: Musical, Bodily-Kinesthetic, and Spatial. The final two of the original seven are often labeled as "personal" intelligences: Interpersonal and Intrapersonal. Preferred learning styles vary for all of these. For example, spatial learners develop their senses and their artistic abilities, and bodily-kinesthetic learners would rather do something than sit down and read a book. Interpersonal and Intrapersonal learners differ in whether they prefer learning in group situations or work best alone [8]. Despite these differences, all seven intelligences are needed to live life well, according to Gardner. The idea is to attend to all the intelligences, not just the first two that have been the traditional concern of educators [2].

Some would argue that all these labels mean nothing. Some would argue that there are more than seven intelligences. Some would argue that the theories prove nothing; they only confirm what any teacher already knows – students take in and process information in different ways. What impact does this or should it have on teaching methods? Sometimes mismatches occur between the learning styles of students

and the teaching style of the professor/instructor. If this occurs, students may become bored and inattentive in class, and do poorly on tests. Likewise, an instructor, when confronted with an unresponsive class, may become overly critical of the students and make the situation worse. Dr. Richard Felder says that professors should strive for balance of instructional methods since trying to teach each student exclusively according to his or her preferences is unrealistic [6].

Now that we are thoroughly overwhelmed by the multitude of labels attached to the various learning styles, this writer decided to go on-line and respond to a few of the free Learning Styles Inventory documents. These give instantaneous results while also offering a disclaimer about the validity of the results. They might say the results are designed to "get you to think about yourself, to consider learning alternatives; not to rigidly classify you." The three tests taken certainly do that.

Learning Styles Inventory www.personal.psu.edu

This was a 24 item, non-timed survey. Respondents were urged answer as honestly as possible. Questions asked about learning preferences with answers marked as seldom, sometimes, or often. The first question, for example, stated: "Can remember more about a subject through the lecture method with information, explanations and discussion."

Results showed the respondent's preferred learning style as auditory, visual, or tactile. My results labeled me as a visual learner. It was explained that I should be sure to look at all study materials; use charts, maps, notes and flashcards; practice visualizing or picturing words/concepts in my head; and write out everything for frequent and quick visual review.

Learning Styles Inventory http://ttc.eoe.uga.edu

This included 27 statements and the respondent was merely to select the items which he/she felt applied to him/her as a learner. Sample statements included: "I like to give examples when I work in a group. I can easily tell when two sounds don't sound exactly alike."

The results gave respondents a graph showing their ranking of visual, auditory, and tactile learning strengths. My highest result was visual, with tactile second, and auditory far behind. In addition to the learner's strengths, this explanation also offered teaching strategies. For example, teachers should make sure visual presentations like notes are organized, and make sure handouts are clearly readable. The tactile category urged teachers to incorporate out-of-seat activities in learning. Teachers with auditory learners need to structure the classroom to minimize noise and distractions.

Index of Learning Styles http://www.ncsu.edu/felder-public/ILSpage.html

Respondents answered 44 questions in a self-scoring questionnaire for assessing preferences on four dimensions of the Felder-Silverman Model. (Active and Reflective; Sensing and Intuitive; Visual and Verbal; and Sequential and Global)

The results offered a number to place the learner on the continuum. The explanation stated that a score of 1-3 said the learner was fairly well balanced on the two dimensions of that scale; 5 – 7 indicated moderate preferences for one dimension of the scale and implied that the student would learn more easily in a teaching environment that favored that dimension; a score of 9 – 11 showed a strong preference for one dimension of the scale and might indicate real difficulties for the student forced to learn in an environment that does not support that preference.

Our results showed me to be balanced on all scales. Active-Reflective, I scored 3 in the "active" direction; Sensing-Intuitive, I scored 1 in the "sensing" direction; Visual-Verbal, I scored 3 in the "verbal" direction; Sequential-Global, I scored 1 in the "global" direction.

So what did all this prove? Much research is being done in this field. Not all will agree that these theories or models are proof of anything. Individuals may be able to manipulate the inventory results if they do not use honest reflection in answering the questions. Despite all these reservations about the validity or accuracy of many learning styles labels, we can agree that learners have preferences for how they best learn and

teachers have comfort zones on how they prefer to teach. Will a balance be found? Regardless, it is excellent food for thought.

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Susan Atkinson

Learning styles: be sure to read the label

The article examines some of the theories and labels assigned to multiple learning styles which have been advocated by American educators beginning in the 1970s. These ideas continue to be either promoted or disputed by current educators.

Key words: learning styles, strategy, conception, learner, educator.

Відомості про автора

Сьюзен Аткінсон – волонтер американського корпуса миру, викладач кафедри практики мовлення Луганського національного педагогічного університету імені Тараса Шевченка. Основні наукові інтереси зосереджені навколо проблематики викладання англійської мови.