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SPECIAL FEATURES OF INDIVIDUAL LEARNING SYSTEMS FROM THE WORLDVIEW PERSPECTIVE

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In the article, it is noted that, as of today, sciences that study human learning behavior have spawned a great number of various theoretical approaches each offering its own view on how the learning process takes place, what factors and to what extent affect this process. There is, nevertheless, a consensus among scientists that different people gravitate to their own preferable individual learning styles and that educational process is more effective when teachers adapt their teaching methods and techniques to their students' individual learning styles. Teachers have difficulty orienting themselves among a vast variety of theories and deciding which type of learning is more appropriate for each specific student or group and which method or type of teaching to use in the work with them. It is suggested that the psychological construct of "worldview" enables teachers to develop a viable approach to establishing the guidelines and criteria for making such a decision. In the article, a brief overview of the existing paradigms and theories as well as of the corresponding types of learning is provided; the conceptual foundations of modern approaches to the study of worldviews are delineated; a worldview approach to systemization of types of learning and their application based on C. Graves's theory is put forward.

Key words: learning, theories of learning, systems approach, worldview, learning systems.

Introduction. Learning is an exceptionally complex type of human life activity. It is studied from different perspectives, which is why there is no commonly accepted, agreed-upon definition and understanding of learning. Moreover, new learning theories are emerging some of which have something in common with traditional views, while others try to explore new possibilities. As educators, we constantly have to deal with situations when some students demonstrate good academic results whereas others come up against barriers that impede their advancement. The causes of unequal academic performance are hard to explain when students in question have approximately equal abilities, and are subjects to the same teaching methods, techniques and styles. Some students keep working diligently, while others loose interest and motivation. For some students aversive stimulation is a strong demotivator, whereas some others feel compelled to work even harder to avoid negative feedback from their teacher. Some enjoy working on their own just for the joy of it and take little heed of grades, while others aspire to cooperation with their teacher, or require constant supervision and care.

The problem is that it is difficult for teachers to orient themselves in the vortex of various theoretical approaches and practical recommendations and decide what types or models of teaching would be the most appropriate and efficient for each individual student. Despite the success of pedagogical and psychological sciences, the criteria for the choice of a certain approach are still weakly defined.

The objective of this article is to explore the possibility of working out the criterion(-a) enabling teachers to make an informed choice in favour of a particular teaching style that would complement the student's natural inclination towards a particular learning style and thus pulling down the barriers to their successful academic performance.

The aim of this article is to:

1. Carry out an overall review of learning theories and views on learning styles;
2. Analyze worldview as a philosophical and psychological construct;
3. Examine the extent to which the issue of the correlation between learning styles and worldviews has been explored as of today;
4. Explore the possibility of using a person's worldview as the criterion for the choice of a teaching style in educational activities.

Theoretical analysis of the problem. At the turn of the 20th century, learning became one of the key topics not only for professionals in the fields of psychology, pedagogy and education, but also in political and economic contexts. One of the reasons for the growing importance of education lies in the fact that the level of knowledge and skills that individuals as well as organizations, companies and nations as a whole possess are becoming a crucial factor in their competitive power in our contemporary globalized knowledge and market societies. It is important, nevertheless, to emphasize that

competitiveness factor is only a minor addition to a much more fundamental role of learning as a basic need, ability and manifestation of human life. Thus, while learning was traditionally and mostly thought of as acquisition of new knowledge and skills, nowadays this notion also includes emotional, social and societal dimensions [8, p. 1]. For example, in the situation of the global environmental, social and economic crisis the concept of education for sustainable development accentuates the aspect of values; learning permeates all spheres of social life and is becoming a powerful tool of informing and consolidating people with the view to finding solutions to problems common to all mankind.

Traditionally, learning is defined as purposeful acquisition and mastering of knowledge, abilities, skills, social experience with the view to their future practical use in one's life [1, p. 198]. K. Illeris links learning to the concept of development and broadly defines learning as "any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or aging." The concept of 'development' is understood as an umbrella term for learning and biological maturation [9, p. 3-5].

As of today, there are several broad paradigms with a number of theories within their frameworks, as well as various more or less independent theories in the field of educational sciences. The major learning paradigms are behaviourist, cognitive, constructivist and humanistic, each of which has its own insight into the nature of learning. Behaviourist paradigm, for example, embraces the well-known theories of classical conditioning (also known as respondent conditioning) by I. Pavlov and operant conditioning by B. Skinner, as well as GOMS Model (Goals-Operators-Methods-Selection rules) by S. Card, Th. Moran and A. Newell, the latter being the human information processing model that describes human-computer interaction. Within the cognitive paradigm various theories have been developed, namely the famous J. Piaget's theory of the stages of cognitive development, attribution theory by B. Weiner, cognitive load theory by J. Sweller, cognitive theory of multimedia learning by R. Mayer and some others. Constructivist paradigm includes cognitive apprenticeship theory by A. Collins, J. Brown and S. Newman, community of practice model by E. Wenger, discovery learning by J. Bruner, cultural-historical concept of psychological development by L. Vygotsky, problem-based learning aimed at helping students develop flexible knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation [7, p. 235]. Within the humanistic paradigm A. Maslow's theory of needs stands out, as well as A. Bandura's concept of social learning, D. Goleman's theory of emotional intellect, experiential learning theory by D. Kolb, self-determination theory by E. Deci and R. Ryan among others. In addition, there is a range of independent theories and models that also make contribution to our understanding of learning such as activity theory by L. Vygotsky, O. Luria and O. Leontyev, B. Bloom's *taxonomy of educational objectives*, perceptual theory of "affordances" by J. Gibson, theory of multiple intelligences by H. Gardner.

This recapitulation of learning paradigmes, models and theories is not exhaustive. The fact that there are so many views on learning is assuredly a positive and commonsense phenomenon since it reflects the considerable progress in our understanding of learning and points to its complex, multidimensional nature at the current stage of the economic and social development of our globalizing society. At the same time, it is getting more and more difficult for educators to grasp and appreciate all these numerous scientific achievements and apply them in practice with their students, each of whom has his or her own particular psychological make-up. Are these theories equally applicable to any student? We argue that what could enable teachers to better orientate themselves in this scientific diversity about learning and appropriate teaching approaches, as well as appreciate the dynamics of the subject-object relationships in an educational situation is the psychological construct of "worldview".

In philosophy, "worldview" is considered as one of the most important concepts characterizing human consciousness. It is defined as a generalized system of views on the world as a whole and one's place in it [3, p. 15]. Worldview is the core of the individual consciousness and selfconsciousness [2, p. 6]. Surprisingly, in psychology this phenomenon is not given as much attention as it really deserves. Worldview as a psychological construct has been given some amount of attention by F. Vasilyuk, I. Demidova, D. Leontyev and some other scientists. It has received more careful scholarly attention from such foreign psychologists as C. Graves—within the framework of developmental psychology, A. Kontos—in sport psychology and counseling, M. Koltko-Rivera, F. Ibrahim and E. Obasi—in the

context of psychological counseling. Among these studies, serious attention, in particular, deserves the work of the American psychologist C. Graves who together with A. Maslow developed the humanistic approach in psychology. Graves is the author of The Emergent, Cyclical, Double-Helix Model of Adult Biopsychosocial Systems Development, or as he briefly called his model—The Emergent Cyclical Levels of Existence Theory (ECLET), which is fully compliant with the systems approach. This theory can be de jure considered as a contribution of paramount importance to the research on worldviews and on how they are related to different types of learning. As a result of numerous experiments and observations, C. Graves arrived at the conclusion that the psychology of the mature human being is an unfolding, emergent, oscillating, spiraling process marked by progressive subordination of older, lower-order behavior systems to newer, higher-order systems as man's existential problems change. He writes:

“When a person is centralized in one state of existence, he has a total psychology which is particular to that state. His feelings, motivations, ethics and values, biochemistry, degree of neurological activation, learning systems, belief systems, conception of mental health, ideas as to what mental illness is and how it should be treated, preferences for and conceptions of management, education, economic and political theory and practice, etc., are all appropriate to that state” [5, p. 72].

Graves speaks here interchangeably about “total psychology particular to each state”, behavior systems, levels of existence, and psychological states, with all these terms referring, in fact, to a person’s *worldview*. C. Graves’s scholarly legacy includes the description of the learning systems particular to each existential level. These existential levels are designated by the pairs of letters of the English alphabet, where the first letter, “A” for example, stands for the neurological system in the brain upon which the psychological system is based, and the second letter, “N” respectively, means the set of existential problems that the ‘A’ neurological system is able to cope with.

C. Graves was keenly aware of the fact that individuals at different levels favour different learning systems and have differing preferences for education. The types of learning systems and related learning theories and theorists per each existential level are summarized in Table 1. The table provides insight into how the diversity of learning theories, approaches and models can be organized around the pivotal notion of worldviews, as well as what teaching styles can be used for each learning systems.

Table 1.

Graves’s Worldviews and Learning Theories [10]

LEVELS OF EXISTENCE	LEARNING SYSTEMS and related LEARNING THEORIES/THEORISTS (by C. Graves, D. Beck, C. Cowan)
1. Automatic (AN)	INSTINCTUAL LEARNING: Instincts, habituation, genetic memories
2. Tribalistic (BO)	CLASSICAL CONDITIONING: Ivan Pavlov (Classical/Respondent Conditioning)
3. Egocentric (CP)	CONDITIONED LEARNING: Instrumental/Operant Conditioning; B. F. Skinner (Radical Behaviorism); Edward L. Thorndike (Law of Effect); David Premack (Premack Principle); Martin Seligman/ Steven Maier (Learned Helplessness)
4. Absolutistic (DQ)	AVOIDANT LEARNING: Mower, O. Hobart (2 Factor Learning/avoidant)
5. Multiplistic (ER)	EXPECTANCY LEARNING: Julian B. Rotter (Expectancy Learning); Edward C. Tolman (Cognitive Map); Wolfgang Kohler (Insight Learning)
6. Sociocentric (FS)	OBSERVATIONAL LEARNING: Albert Bandura (Observational Learning)
7. Systemic (GT)	INFORMATIONAL LEARNING
8. Intuitive (HU)	EXPERIENTIAL LEARNING

C. Graves recommended some general practical guidelines in this respect. With a fair degree of certainty it can be contended that the range of the Gravesian levels achieved by the majority of the students of the Ukrainian higher educational establishments extends from DQ to GT, with some possible cases of CP and HU. Thus, we will give some brief glimpses into how a teacher might need to handle his or her students at these levels to ensure the learning process takes place in his or her class.

According to C. Graves [6], the teaching style that is appropriate at the CP level can be called “tough paternalistic.” CP individuals learn by “trial-and-error” method, thus B. F. Skinner’s operant conditioning is the best strategy which should involve: accentuating the positive, and ignoring the negative; giving some extrinsic reward immediately upon the achievement of the desired behavior or result; no punishments, just drilling over and over again; having all learning activities tightly structured and richly stimulating so that a CP student is kept busy and focused every minute; never going into the reasons for the student’s devious behavior, no preaching or remonstrating.

Learning at the DQ level takes place in accordance with the principles of avoidance learning formulated by O. Mowrer in his two-factor avoidance learning theory. DQ students contrast sharply with those at the CP level in that they are extremely sensitive to punishment and thus motivated, above all else, to avoid aversive stimulation. They learn best through *punishment* rather than reward. What is desired here is a benevolently autocratic, moralistic-prescriptive teaching style of a “friendly father”, who should be a prestigious instructor with high establishment status. The teacher should be able to establish a close, friendly rapport with DQ students, encourage them to express their fears and feelings (should they have a need for that), give them confidence that they will be able to learn successfully. Also, it is worth taking into account the fact that absolutistic students do not respond to autonomy and participation—they choose autocracy, not democracy; they need firm direction and instruction.

In the multiplistic existential state situationalism and relativism are introduced into ER students’ way of thinking. They think in terms of analyzing, and wanting to comprehend in an impersonal, objective, distant, rational, positivistic manner. The key to successful dealing with ER students is giving them the opportunity to learn through their own effort, the presence of mild risk, various and personally meaningful learning experience.

The learning system in the relativistic, sociocentric state FS should be based on the principles derived from the contemporary theories of social learning by J. Rotter and observational learning by A. Bandura. FS students are capable of learning when they observe the consequences obtained by other people even without their own involvement in the observed activities. FS students prefer to *sense* and *apprehend* rather than just rationally *comprehend*. Participative, democratic, non-directive style of relationships based on openness, candidness, honesty works exceptionally well with these interpersonalistic students.

Students in the systemic, or cognitive, existential state GT believe that knowledge exists under certain circumstances, in situations and the environment that constantly change. Several interpretations of any phenomenon are always legitimate depending on each concrete person, his or her point of view and goals. Thus, the appropriate teaching style here is facilitation through stating problems, providing various points of view on that problem and giving the students the possibility to decide on their own what answer to accept.

Conclusion. The proposed worldview approach to the systematization of learning theories offers promising prospects and requires further development. Since different people study differently depending on their worldviews, it is necessary to elaborate different teaching strategies for individuals with different worldviews. Also, it is important to note that the purpose of education should consist not only in providing students with knowledge and skills, but also in promoting students’ advancement towards higher levels of existence and cognitive complexity. Thus, the key to teacher’s professional mastery should include the theoretical knowledgeability as well as the ability to adequately assess their students’ personal worldviews, thinking systems, the degree of readiness for change, etc., and to choose those theoretical and practical approaches that are congruent with their students’ psychological states and the learning systems particular to those states.

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С. А. Кононенко. Світоглядні особливості індивідуальних систем навчіння.

На сьогоднішній день в науках, що вивчають навчальну поведінку людини, накопичилась величезна кількість різноманітних теоретичних підходів, які по-різному пояснюють, як відбувається процес навчіння, які фактори і якою мірою на нього впливають. Тим не менш, серед науковців існує загальний консенсус щодо ідеї про те, що для різних індивідів притаманні різні типи навчіння, і що освітній процес є більш ефективним, якщо педагог адаптує свої методи і прийоми роботи до індивідуального стилю навчіння (англ. *learning style*) або його типу (англ. *type of learning*). Сучасному педагогу важко зорієнтуватися у такому теоретичному різноманітті і вирішити, який вид навчіння є найбільш притаманний конкретному студенту або групі, і які методи навчання обрати у роботі з ними. Психологічний конструкт «світогляд» надає можливість розробити дієвий підхід до визначення орієнтирів та критеріїв такого вибору. В статті надано короткий огляд сучасних парадигм і теорій навчання та відповідних видів навчіння; розглянуто концептуальні основи сучасних підходів до вивчення світоглядів; описано основні положення світоглядної теорії емергентних циклічних рівнів існування К. Грейвза; на її основі запропоновано світоглядний підхід до систематизації видів навчіння та їхнього практичного застосування.

Ключові слова: навчіння, теорії навчіння, системний підхід, світогляд, типи/системи навчіння.

С. А. Кононенко. Мироззренческие особенности индивидуальных систем научения.

Современному педагогу сложно сориентироваться в огромном разнообразии в науках, изучающих учебную деятельность человека, и решить, какая теория и какой вид научения (англ. *type of learning*) больше всего подходит конкретному ученику или группе, и какие методы обучения выбрать для работы с ними. Психологический конструкт «мироззрение» даёт возможность разработать действенный подход к определению ориентиров и критериев такого выбора. В статье дан короткий обзор современных парадигм и теорий научения и соответствующих подходов к научению; рассмотрены концептуальные основы современных подходов к изучению мироззрений; описаны основные положения теории эмергентных циклических экзистенциальных уровней К. Грейвза; на основе этой теории предложен подход к систематизации видов научения и намечены пути его практического применения.

Ключевые слова: научение, теории научения, системный подход, мироззрение, типы/системы научения.