European Journal of Humanities and Educational Advancements (EJHEA)
Available Online at: https://www.scholarzest.com
Vol. 2 No. 10, October 2021
ISSN: 2660-5589

ISSUES OF DEVELOPING INTELLECTUAL AND COGNITIVE POTENTIAL OF STUDENTS IN THE CREDIT-MODULE SYSTEM

J.S. Otepbergenov
PhD, Associate Professor of
the department of methodology of teaching informatics
Nukus SPI named after Ajiniyaz

Article history:

Received: 27th August 2021
Accepted: 26th September 2021
Published: 30th October 2021

Abstract:

The article analyzes the development of the intellectual and cognitive potential of students in the organization of the educational process on the basis of a credit-modular system. It is also recommended that the effective use of visual models in the development of the intellectual and cognitive potential of students of higher educational institutions is recommended, and its capabilities are disclosed..

Keywords: Credit-Modular System, Intellectual And Cognitive Potential, Conditions, Graphic Model Of Information Presentation, Models, Semantic-Cognitive Map, Figure, Graph, Table, Compaction Diagram

It is known that in recent years, the process of modernization of the system of continuing education, adopted in the Republic of Uzbekistan, is underway. A number of reforms, especially in the development of the higher education system, are yielding positive results. The Concept for the Development of the Higher Education System until 2030 provides for the improvement of the quality of education, training of competitive personnel, effective organization of scientific and innovative activities, international cooperation based on the needs of the social sphere and the economy. aims to develop cooperation [1]. At the same time, in connection with the gradual transition of the educational process in higher education institutions to the credit-module system, it is important to increase the intellectual and cognitive potential of future teachers.

The concept of cognition means "knowledge", "knowledge". Cognitiveness is primarily a "method that focuses on the development of learners' thinking, which in one form or another involves the organization of group discussion". Cognitive development is the "formation and development of cognitive areas of man, such as perception, attention, imagination, memory, thinking and speech" [4]. In this sense, cognition is primarily related to psychological cognitive processes, and it requires every learner to be mentally active, i.e., intellectually active. Thus, cognition is the integrative dynamics of the individual, reflecting the combination of motivational-value orientation, cognitive, process-activity and reflexive-evaluative activity, which allows the productive implementation of the process of knowing the objective being, as well as the accumulation of experience in solving information retrieval, processing and application serves to effectively perform real professional tasks by combining features. It is especially important to create appropriate conditions in the educational process in the development of cognitive and intellectual potential of students. In our study, the concept of "condition" is interpreted as a situation in which something is related, an environment in which a process takes place [5].

Thus, the pedagogical conditions should reflect a specially organized environment based on the interaction of faculty and students to achieve the goals of education. One of the important conditions for the development of cognitive and intellectual potential in students is the effective use of graphic models. However, in the process of cognitive activity, human intellectual ability is developed and used, which plays an important role in the analysis and generalization, critical thinking, separation of contradictions and problems in the global information environment [2; 6-p]. Determining the cause-and-effect relationships and patterns of cognitive activity [7] allows the use of various models, semantic cognitive maps, diagrams, graphs, tables, diagrams in cognitive activity. Therefore, one of the tasks to be solved in the educational process aimed at the development of cognitive competence in the context of informatization of education is to master various methods of creating models, semantic-cognitive maps, diagrams, graphs, tables, diagrams, etc. through information and communication technologies. In our study, graphic models were interpreted as a means of increasing the effectiveness of cognitive activity based on their potential, revealing the possibility of combining emotional (intuition, will, attention) and rational (thinking activity) levels of cognition. Below we reveal the possibilities of graphic models as a means of cognitive activity.

The graphical model of information presentation is a set of "concise" methodological and technological methods and visualization of educational materials [3; 160-p.].

Analysis of the practice of using graphic models in the learning process shows that the following are common: graphic logic of learning elements, meta-series and N.Erganova's basic synopsis, M. Minsk's frame model, production model, logical model, semantic network model, drawing abstract, mental (intellect) card. Let's look at each of these models.

The logic-based graph of learning elements proposed by N. Erganova is used to systematize educational information based on the disclosure of the general content of concepts and to exclude concepts and terms in the text that are insignificant, overloaded.

This allows you to create a network structure in the form of a graph by placing the basic concept of the block of information being studied at the top. Its content reveals concepts grouped in sequence based on a common essence [8].

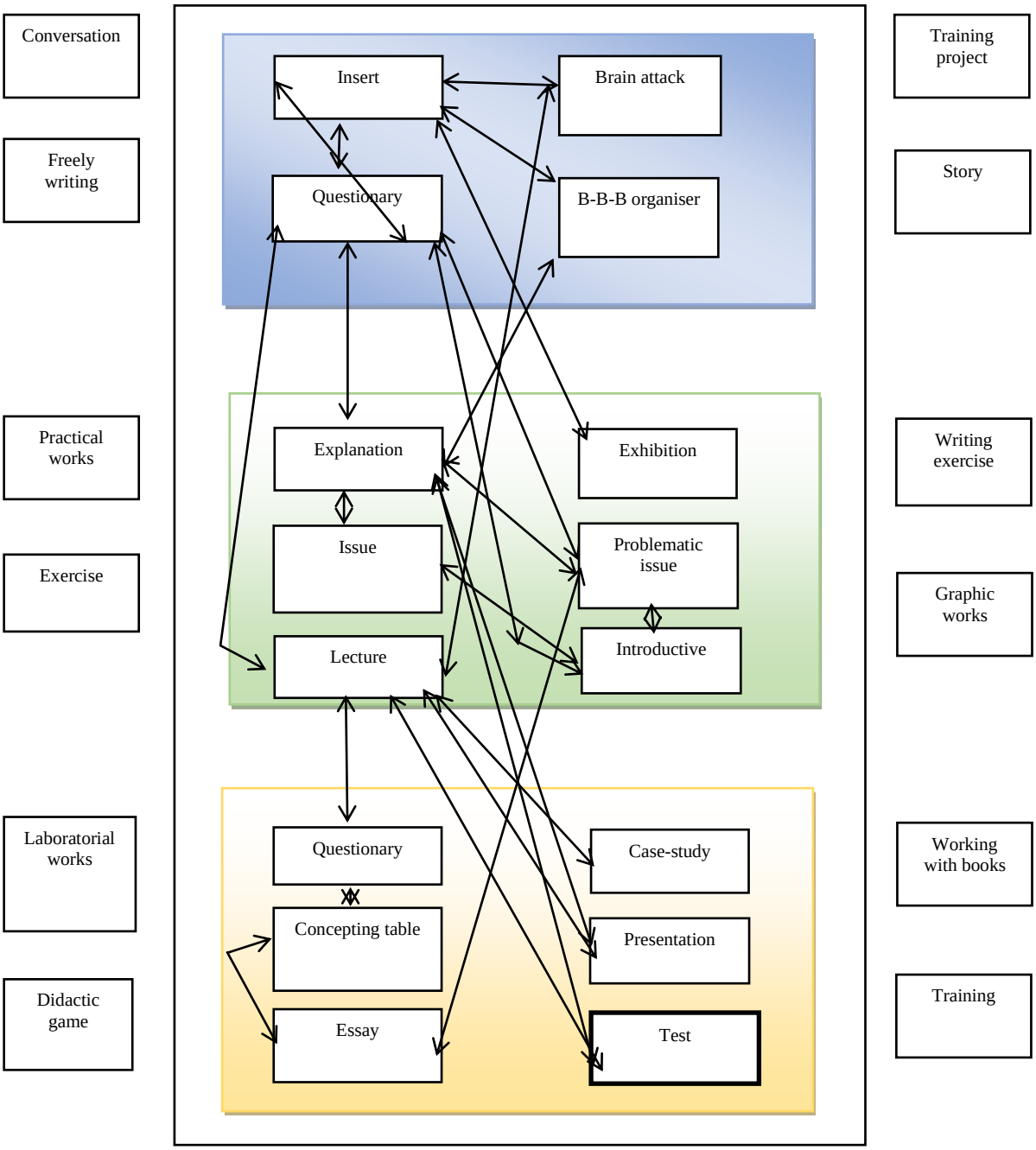

Figure 1. Logic-based graph of learning elements on the topic "Teaching methods"

The use of a logic-based graph of learning elements to systematize the learning material allows the student to understand a large amount of information as components of the didactic system, the professor-teacher to quickly control the acquisition of educational information by students. A logic-based graph of the learning elements developed as an example is shown in Figure 1.

The metaphor proposed by N. Erganova activates the process of perception of students' educational information based on the use of information elements expressed in geometric shapes that meet the requirements of psychological and psychophysiological perception.

Metareja represents many invariant figurative shapes (line, cloud, rectangle, triangle, circle) that represent a specific meaning [86].

The advantage of metareja in the learning process is that the process of mastering the learning material is accelerated and facilitated through the use of emotional forms. For example, the following metaphor for the theory of motives can be cited as an example (see Figure 2).

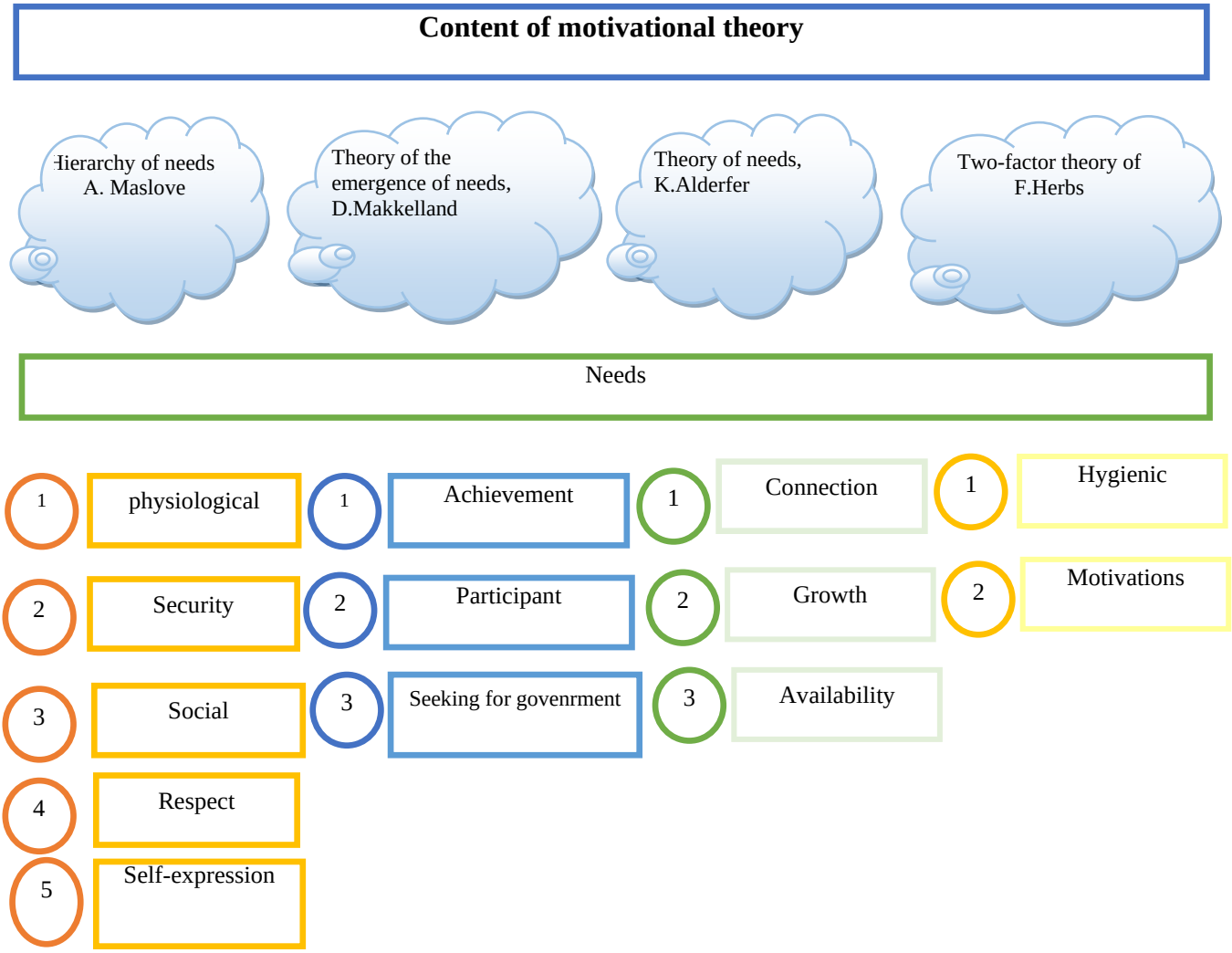

Figure 2. An example of a metaphor on the topic "The content of motivational theories."

In accordance with the logic of cognitive activity of students, the basic concept is used in the visual presentation of the main content of the educational material [8]. Presentation of learning elements in a visual form creates a guiding basis for the organization of activities, forms actions for execution and control. This, on the one hand, forms a holistic knowledge of the object under study, on the other hand, forms a general system of educational activities related to their formation (see Figure 3).

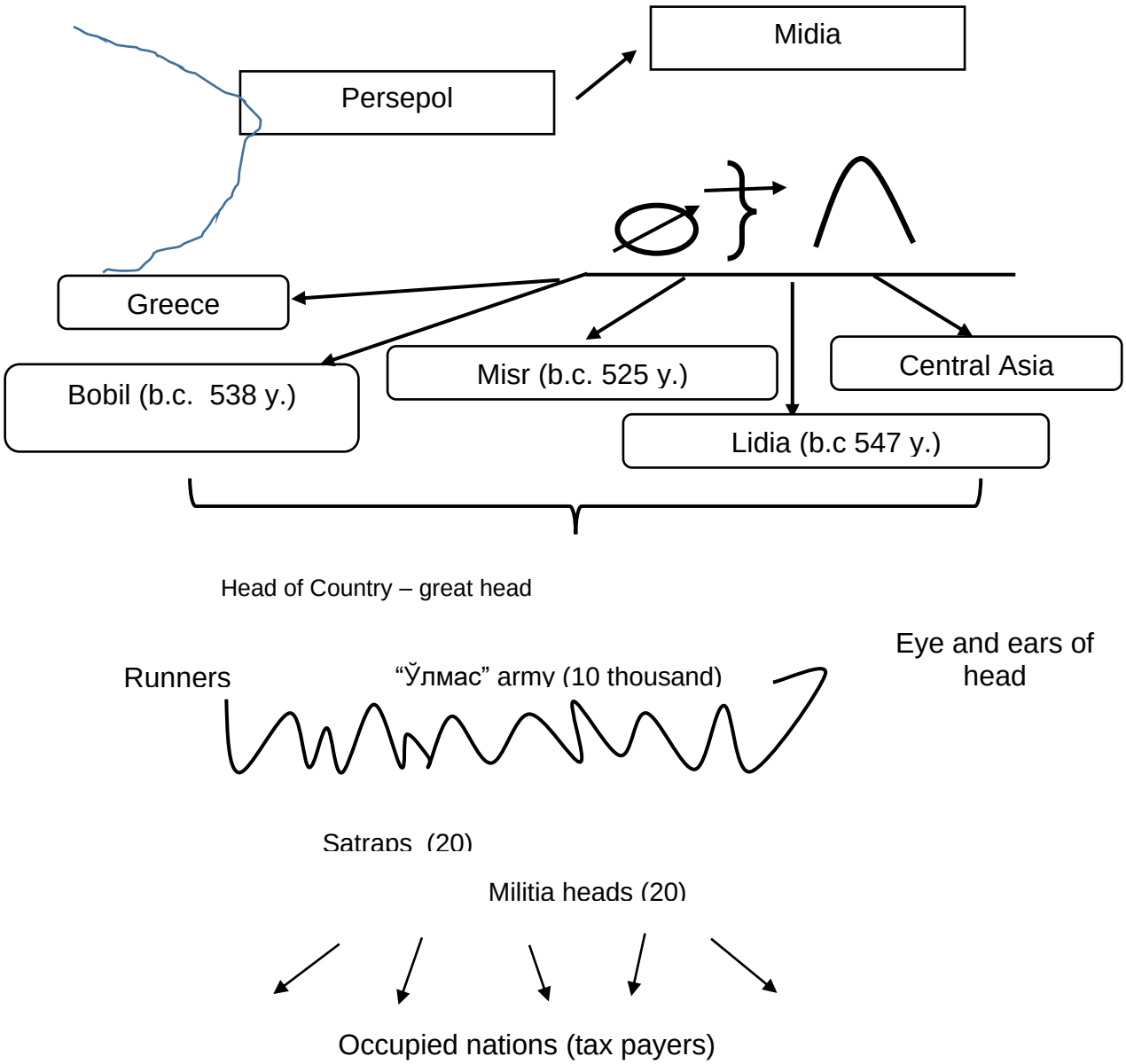

Figure 3. Basic Synopsis on the Kingdom of Persia

Purposeful use of the basic abstract Selection and focus on the main connections of individual units of information; clear understanding of the content of the training material based on the compatibility of the main signs and symbols; provides the ability to work independently with logical relationships that are of an individual nature.

A logic-based graph of learning elements, a metaphor, and a basic synopsis are models of presenting information that allow students to increase their direct cognitive activity in accordance with a psychophysiological logical basis.

In our opinion, it is expedient to use the logic-based graph of the learning elements proposed by N. Erganova, metareja and basic abstract to increase the cognitive activity of students in the learning process. These symbolic-pictorial models of presentation of educational information effectively influence the development of emotional and volitional qualities of learners through emotionally affective forms.

Hence, in order to understand the cognitive world of man, it is necessary to briefly describe another aspect of the study of cognitive diagrams related to the field of artificial intelligence. Various events take place in a person's life (reading, working, going to the theater, exhibitions, shops, raising children, communicating, playing, etc.) consists of actions / processes. Repetition of ordinary actions is first consolidated in the mind, first in the form of human behavior, and then in the form of a system of concepts.

REFERENCES:

1. Ўзбекистон Республикаси Президентининг 2019 йил 8 октябрдаги "Ўзбекистон Республикаси олий таълими тизимини 2030 йилгача ривожлантириш концепциясини тасдиқлаш тўғрисида"ги ПФ-5847-сон Фармони. // Қонун ҳужжатлари маълумотлари миллий базаси, 09.10.2019 й., 06/19/5847/3887-сон.
2. Гафурова Н.В. Интегральная модель интеллектуально- личностного развития обучающихся в системе образования: Монография. – М.: МАКС Пресс, 2004. – 220 с.
3. Лаврентьев Г.В. Инновационные обучающие технологии в профессиональной подготовке специалистов. Часть 2. – Неудахина–Барнаул: АлтГУ, 2004. – 232 с.
4. Мусурманова О., Палуанова Х., Рискулова К., Курбаниязова З. Педагогик атамалар луғати (ўзбек, рус, инглиз тилларида). – Тошкент, "Turon-Iqbol", - 2019, Б. 270.
5. Ожегов С.И. Толковый словарь русского языка. 100000 слов, терминов и выражений / С.И. Ожегов. – Изд.: АСТ, 2016. – 1376 с.
6. Орешкова С.П. Осипова С.И. Учебная деятельность в контексте формирования умений обучающихся структурировать теоретический материал / С.П. Орешкова, С.И. Осипова // Современные проблемы науки и образования. – 2007. - №6. – С. 24-29.
7. Талалуева Ю.Г. Особенности организации познавательной деятельности будущих педагогов профессионального обучения // Молодежь и наука: Сборник материалов VI-й Всероссийской научно-технической конференции студентов, аспирантов и молодых ученых (Красноярск, 20-25 апр. 2010 г.) [Электронный ресурс]. – Красноярск, 2010. URL: http://conf.sfu-kras.ru/sites/mn2010/section15.html (дата обращения: 02.05.18).
8. Эрганова Н.Е. Методика профессионального обучения: учеб. пособие для студ. высш. учеб. заведений. – М.: Издательский центр «Академия», 2007. – 160 с.