

INTERNAL DIFFERENTIATION-A TOOL FOR IMPLEMENTING THE INDIVIDUAL APPROACH IN GEOGRAPHY TRAINING

DOI: <http://dx.doi.org/10.18509/GBP.2020.98>

UDC: 37.016:91-027.521

37.091.33-027.521:91

Maya Vasileva

Stanislava Misheva

Dessislava Poleganova

Sofia University "St. Kliment Ohridski",

Faculty of Geology and Geography, **Bulgaria**

ABSTRACT

Different and various interpretations of the individual approach concept are tackled in the field of didactic and pedagogical research. It is labeled with different names and respectively with distinct content and meaning. Apart from this, the individual approach has a non-questionable impact on the effectiveness of geography training process. It is due to the individual and unique qualities each student possesses and what distinguishes him from others. It is very important that the knowledge acquisition, cultivating the competency and creating a behavior model is a unique individual process which is related to the framework of common interrelations of its functioning. The essence of individual approach is to study and comply with the individual peculiarities of pupils in educational process, to find the positive and overcome the negative individual features, to develop student's personal and creative skills. And although the listed actions are difficult to achieve in their entity in practice, it is worth investigating the particular mechanisms and methods for applying the internal differentiation in learning and teaching process. In current paper is explored the essence and key elements of the internal differentiation as well as its strengths and weaknesses. In addition, it is analyzed the differentiation of geography curriculum and the student's activities in the real training process.

Keywords: geography training, individual approach, internal differentiation

INTRODUCTION

This wonderfool caricature is known for a long time but still is up-to-date. Why? What does the author say? That the school is not fair? Or all the pupils are different? And does the attitude of school education is so wrong to set common goals and expected results in curriculum for all? The answers might be numerous and divergent.

And if we want to respond in the caricature style: If the task is so important, how it could be fulfilled by all? May be, using teamwork: the monkey will lift the fish and the others – the elephant. And by doing this the animals develop their social competence.

The decision could be in re-shaping the task according to everyone abilities. The monkey can climb on the tree. The elephant could push the tree down. If the tree is lying on the ground the penguin can decide which branches go around and what speed to use and reach the crown of the tree. The fish may watch and write a dairy about other animals' climbing...

But, can't we ask simply all the animals what do they want? Are they interested in tree and do they want to learn something about it? And, more important, what tasks would

animals choose on their will? Perhaps this is the right goal for everyone i.e. to support self-learning and finding one's own sense?



Figure 1. Equal chances for all students [by: Hans Traxler, Chancengleichheit, in: Michael Klant [Hrsg.], Schul-Spott: Karikaturen aus 2500 Jahren Pädagogik, Fackelträger, Hannover 1983, S. 25], *Teacher: "To the aim of the fair selection, the task is common for everyone: "Climb the tree!"*, [1]

And how will look the caricature if we see it from the geography didactic viewpoint?

DATA & METHODS

In the current educational system based on lessons and classes the pupils are divided according to their age. The same age determines mainly the same level of development: similarities in social experience and way of thinking, common models of behavior and attitudes. These facts are the reasons to choose team (group) organization of training process and suggests coincidence in the acquisition of knowledge from individuals. It is stated that as younger the pupils are the bigger is such correlation due to very restricted social experience and short history of individual development.[2]

But although the similarities in pupils' age features, we should have in mind that the knowledge is acquired individually from every student in real training process. Thus, the peculiarities of pupils are so important and to consider them is the crucial way to improve the training effectiveness. "The essence of individual approach is to study and comply with the individual peculiarities of every student in educational process and to foster the positive and overcome the negative individual features ..." [3]

Recently, the principle of individual approach gains more and more popularity because the possibilities for gaining social experience from different sources rises dramatically. And, as result, the pupils have distinct way of living and have substantial variations in interests and hobbies. So, when we explore the individual approach in geography training, the main stress is put on those individual features of students related directly to acquirement of geographic knowledge and cultivating skills and competences. And we have to pay attention to following individual features of trainees:

- Individual way of thinking
- Level of knowledge and skills
- Working capacity
- Level of cognitive and practical activity and independence
- The pace of progress
- Attitude towards learning
- Evidence and character of thirst of knowledge
- Level of development of one's will.[4]

Therefore, the individual features of pupils can influence positively, neutrally or negatively the training process. As the impact degree may vary, the teacher should study the pupils' individual characteristics and act in accordance with them during educational process. But the teacher is not a scientific researcher who should investigate thoroughly one or another student's peculiarities. Therefore, it evokes the need for easy and accessible methods and tools for implementing the individual approach in geography training. That's our main argument for priority study of internal differentiation and in its narrow understanding it is a particular mechanism for implementing the individual approach in geography training. Most interesting is its influence on planning and presenting the geography lesson. The path starts with didactic and methodical organization of training and lesson and ends to its implementation in groups of training.[5]

The essence of internal differentiation is every student to receive such educational task that corresponds to his individual needs and skills. [6,7] And it gives the chance of pupils in a class to work independently or in small groups on different tasks. Such division is not related to the scope and complexity of task but with the coherence and continuance of working on the task.[6] And be in sync with the spirit of caricature – where is the contradiction? The equal chance means that all pupils will receive a common normatively determined goal (in curriculum) that should be achieved in the same way and with the same degree from all. But the caricature does not show this.

Where is the problem? It originates from not considering the key elements of internal differentiation. (Fig. 2)

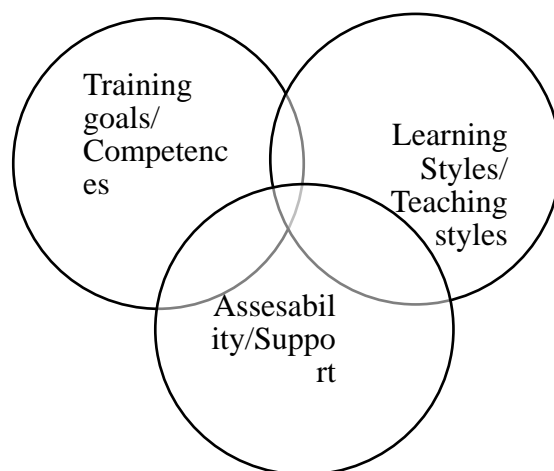


Figure 2. Key elements of internal differentiation [8]

The question about setting different training goals is arguable. The common practice in Bulgarian school is to divide the subjects in general and profiled. And this leads to educational program with different goals and expected results, and textbooks with wide range of complexity. But in one class such differentiation of goals is unthinkable. There is no teacher who could work simultaneously with two different textbooks and programs in one class.

Theoretically, the internal differentiation relies on behaviorist theory of learning and points out that what have been taught (input) almost automatically is transformed in learnt (output), [9],(Fig.3).The cognitive scientific basis in behaviorism assumes that when individuals acquire knowledge they remember the things they hear or see [10]. It is quite hard to prove it empirically because the same teaching (input) doesn't correspond

automatically to the same learnt (output) by pupils with different experience and interests [6]. Nowadays, the cognitive constructivist theory of learning offers a better understanding and explanation. The human brain has no direct contact with the environment and its perception is done in own closed process [10], (Fig. 4). The brain receives information from the sensory organs, processes and connects it with already existing and developed cognitive structures and builds neuron code.[11] The criticism to constructivist theory of learning goes in two main directions. Firstly, the information that is not connected with cognitive structures won't be perceived. And secondly, the already perceived information but not in the way science insist is hardly to be re-perceived again. So, consequently there is no logical (cause and effect) correspondence between the taught (input) and learnt (output).



Figure 3. Cognitive behaviorist theory of learning, [8]

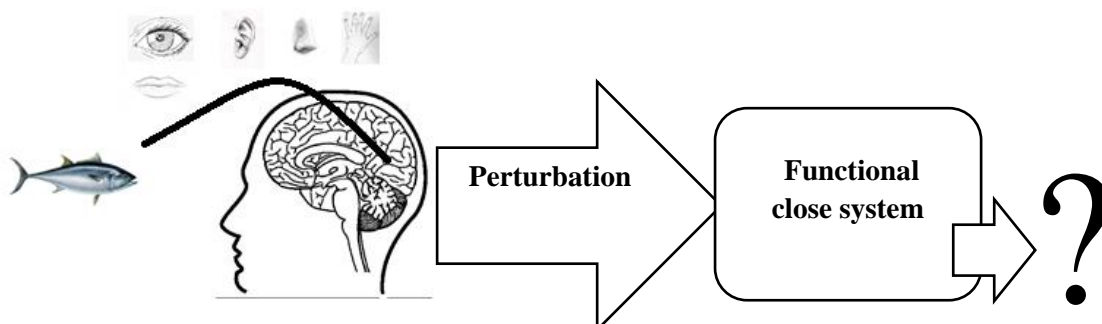


Figure 4. Cognitive constructivist theory of learning, [8]

The above-mentioned finds its reflection in formulation of the training goals because there are problems with the common as well as with different goals. What have been taught (input) can't be automatically transformed in learnt (output), so we should think in opposite direction – to start with the learnt (output). In addition, setting different goals has no sense or can be done only in cases when it has immediate effect on future educational result. [12]

Learning styles are defined as the way mind processes the new information.[13] Although, very often the term is used as interchangeable with learning types, there is difference between them. The learning types are defined in relation to sensory organ that is responsible the student to perceive the information in easiest way. The problem arises due to underestimation of cognitive processing of the information, and on theoretical ground – with continuous strong influence of behaviorist theory of learning. There are various classifications of learning styles. The British geography didactic is based on Gardner classification but the French geography didactic uses mainly the Kolb classification and both systems have great practical importance. For example, according to research led by Mora [14] 22 pupils show strong concentration in logical-mathematical (Gardner) and concrete experience (Kolb) learning styles (see table 1).

Although the big differences between the two classifications, they have something in common – the students prefer to discover the things by themselves. This is the pillar in both theories and could be pointed out as compulsory requirement in planning and implementing the teaching and learning process.

Table 1. Exploring the learning styles/stages according to Gardner and Kolb classifications, [adopted by 14]

Learning styles (Gardner classification)	Number of pupils	Learning stages (Kolb classification)	Number of pupils
Verbal-linguistic	2	Active experimentation	4
Logical-mathematical	13	Reflective observation of the new experience	6
Visual-spatial	0	Abstract conceptualization	1
Musical	1	Concrete experience	16
Bodily-kinesthetic	5		
Interpersonal	1		
Intrapersonal	0		
Naturalistic	0		

When we discuss the inclusive school system the problem has its specific - the pupils with special educational needs require additional didactic resources in training process. The different forms of Scaffolding are perspective tool that could support teacher's work in geography training. It is considered that Scaffolding is the more appropriate method when the teacher is working with pupils experiencing difficulties with given tasks. For example, teacher gives the task to describe a geographic object. According to their abilities part of pupils will receive worksheet only with the task conditions, the other part – worksheet with key words that should be used doing the task and third one – a structured text with blank spaces where pupils should write the missed terms and information.

The use of Scaffolding should be supplemented with intensive Debriefing. [15] The Debriefing is needed for reflection of one's own educational process, i.e. it is a metacognitive activity. Using it the student can discover and use different ways of learning and to think about his strengths and weaknesses. Thus, the trainee has clear vision about the goal, namely – to solve the task independently and if possible - without Scaffolding. In addition, it helps teacher to avoid the confusion caused by working with many methods in one class.

DISCUSSION

There are many opportunities for internal differentiation in geography lesson [16] and they can be used in the lesson structure in following ways:

- The educational content is presented, and the teacher gives a common task to all pupils that allows different solutions. Typical methods for such differentiation are Mind mapping and Diamond Ranking.
- Teacher offers students different educational materials that allow to solve the common task for all. The answers may differ, but they will empower pupils to understand the problem in its entity.
- The teacher presents the educational materials and gives number of tasks that should find their solution consequently and as result – final solution of the problem. Quite effective for the teacher is to use the method Storyline.
- The educational content is presented, and the teacher gives pupils many different tasks. The individual solutions, which every student can find, are the distinct perspectives in exploring the problem.

- And maybe, the most complicated way is to give educational materials to pupils considering their learning style - everyone will have a different task with a different solution. And it is quite long as a process and can be organized in several lessons.

CONCLUSION

We can explore the individual features of pupils using a wide range of methods. But the teacher is not a scientific researcher who should investigate thoroughly one or another student's peculiarities. Therefore, it evokes the need for easy and accessible methods and tools for implementing the individual approach in geography training. The internal differentiation is one of the useful tools supporting teachers in effective organization of geography training - from curriculum to lesson. That's why it is noteworthy for teachers to have better understanding of the key elements of internal differentiation in order to achieve better results in training.

REFERENCES

- [1] Traxler, H. Chancengleichheit. - In: Michael Klant [Hrsg.], Schul-Spott: Karikaturen aus 2500 Jahren Pädagogik, Fackelträger, Hannover 1983, pp. 25
- [2] Андреев, М. Процесът на обучението. Дидактика, УИ „Климент Охридски“, София, 1996, 217-220
- [3] Казанский, Н.Г. и Т.С. Назарова. Дидактика, Москва 1978
- [4] Щукиной, Г.И. Педагогика школы, Москва, 1977
- [5] Rinschede, G. Geographiedidaktik. (3.Aufl.), Paderborn u.a.: UTB Schöningh, 2007
- [6] Eberwein, H. Differenzierung, zielbezogene. – In: Haarmann, D. [Hrsg.]: Wörterbuch Neue Schule. Die wichtigsten Begriffe zur Reformdiskussion. Weinheim, Basel, 1998, pp. 49-55
- [7] Trautmann, M. & B. Wischer. Individuell fördern im Unterricht. Was wissen wir über Innere Differenzierung? In: Pädagogik, 12, 2007, pp. 44-486
- [8] Uhlenwinkel, A. Binnendifferenzierung. - In: Haversath, J.-B. [Hrsg.] Geographiedidaktik. Theorie – Themen – Forschung, Westermann, Braunschweig, 2012, pp. 330-343
- [9] Voss, R. Unterricht ohne Belehrung. Kontextsteuerung, individuelle Lernbegleitung, Perspektivenwechsel. - In: Voss, R. [Hrsg.] Unterricht aus konstruktivistischer Sicht. Die Welten in den Köpfen der Kinder. Weinheim, Basel, 2005, pp. 40-62
- [10] von Foerster, H. & B. Pörksen. Wahrheit ist die Erfindung eines Lügners. Gespräche für Skeptiker. Heidelberg. 2004
- [11] Roth, G. Das Gehirn und seine Wirklichkeit. Kognitive Neurobiologie und ihre philosophischen Konsequenzen. Frankfurt/M, 1997
- [12] Evans, L. & D. Smith. Inclusive geography. – In: Balderstone, D. [Hrsg.]: Secondary Geography Handbook. Sheffield, 2006, pp. 332-353
- [13] Grave-Resendes, L. & J. Soares. Diferenciação Pedagógica. Lissabon, 2002
- [14] Mora, F. M. Estilos de aprendizaje y desarrollo de competencias. - In: http://oducal.uc.cl/index.php?option=com_docman&task=cat_view&gid=103&lang=es&limitstart=20, 2011 (25.01.2020)
- [15] Nichols, A. Thinking Skills and the Role of Debriefing. - In: Balderstone, D. [Hrsg.] Secondary Geography Handbook. Sheffield, 2006, pp. 180-197
- [16] Rawding, C., S. Johnson & F. Price Achieving effective differentiation in geography. - In: Teaching Geography, 1, 2004, pp. 19-22