

DIFFERENTIATING INSTRUCTION UPON LEARNING STYLES IN HIGHER EDUCATION: A CONTROVERSIAL ISSUE

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Abstract: *Within the frame of this paper we are going to observe the extent to which differentiated instruction according to the student's learning styles has as result the improvement of academic achievement on a higher educational level. Our study aims at providing support in both theory and research for differentiated instruction based on students' learning preferences. Overall, this study brings arguments to illustrate the idea that differentiated instruction leads to higher academic achievement compared with the whole-class teaching-learning approach. Our conclusions provide a foundation on which research addressing differentiated instruction in higher education may continue to be built.*

Key words: *differentiated instruction; whole-class instruction; learning styles.*

1. Introduction

The implementation of differentiated instruction in higher education raises two fundamental issues:

- (a) To what extent such an approach to instruction would be justified in higher education?
- (b) Is it possible to implement this type of instruction in higher education and if so, which is the most appropriate way to differentiate instruction?

(a) The pros of legitimacy regarding differentiated instruction are represented by the characteristics and trends in the present superior education, among which the most relevant for the matters under discussion here are the following: the constant growing in number of people included in tertiary education; the students' diversity regarding: age, interests, level of

training, level of aspirations, culture, ethnicity, level of intellectual, moral, etc., development; the intensification of students' mobility; the promotion of student-focused education; the passing from teaching-centered education to learning-centered education [16]; the passing from the professor offering the masterly discourse to the professor seen as partner [29]; the designing of the academic curriculum on the following principles [16]: the principle of selection and cultural hierarchicalization; the principle of functionality and professional adequacy; the principle of coherence; the principle of equality of chances; the principle of flexibility and individualized career path; the principle of connecting to the social environment.

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Starting from these premises, we consider that differentiated instruction enlists itself among the requests and directions of the university education reform, having the potential to provide: reevaluation of individual differences; focus on the student and learning activities; equal chances regarding the professional training; flexibility of the learning offer, by creating individualized and flexible learning paths.

(b) As for the feasibility of instruction, if we make reference to the specialty literature and to studies dedicated to this issue, the following tendencies stand out: Tomlinson [30] reached to the conclusion that the differentiation of the instructional activity is performed mainly according to the interests and learning styles of the pupils/students; having in view the great number of students involved in higher education, we think that the instruction differentiated according to learning styles characterizes itself through a greater efficiency in comparison with the instruction based on students' interests; Landrum and McDuffie [19] consider that the process of differentiated instruction typically includes focusing on the learning profile of those educated. But there is no consensus regarding the most favorable modality to respond to the students' diversity, the specialists in differentiation issues take into consideration the learning styles when they make the inventory of the modalities to differentiate instruction [31], [19]. Recent studies in the field of psychology of learning have revealed the fact that adults are people whose learning style and rhythm is stable [23], a fact that implies respect for and evaluation of inter-individual differences within the frame of the university instructional activity. According to the higher education reform, the achievement of student-focused education is based on knowing the students (including the aspect of learning style) and

combining as many students' learning styles as possible [29]. By corroborating the specialists' arguments, we think that a feasible method to differentiate instruction on the level of higher education is represented by the differentiation upon personal learning styles.

2. Investigations regarding differentiated instruction upon learning styles in higher education

During the last decades, the researchers revealed an intensification of concerns regarding differentiated instruction according to learning styles, on the level of higher education [2-4], [7], [11], [17], [25]. When we examine the literature in the domain, we find that the majority of the studies concerning this issue are theoretical and bring arguments in favor of adapting the didactic strategies to the various learning styles of the students [3], [7], [26]. Upon Beck's opinion [7] on differentiating instruction upon personal learning styles is liable to lead to a more efficient instruction and, implicitly, to the improvement of the academic success as the students will be able to solve the learning tasks better if they are presented the material in a manner according to their learning preferences and more than that, it is presumed that they will develop positive attitudes towards the learning activities.

The empirical studies that investigate the impact of differentiated instruction upon the results obtained in tertiary education are classified, according to the methodology in use, into two categories: qualitative studies and quantitative studies. As for the qualitative investigations, they are focused regularly on the identification of students' perception on the efficiency of this paradigm [15] or on the identification of students' needs to be approached in a differentiated manner [33]. On the whole, the results of these studies are drawing attention on the students' need to be

approached differently, with respect to their individual particularities, to be treated as growing personalities having individual needs that are to be understood, respected and reevaluated within the instructive-educational process [33]. Also, the results of the qualitative investigations reflect the students' critical attitude as against the paradigm of differentiated instruction, as they identify both advantages (equal chances to learning; solutions to students' different learning needs) and disadvantages of this type of instruction (loss of time and

energy on the professor's side; impossibility to apply on every didactic activity; difficulties to apply when the professors haven't been formed in this paradigm; difficulties in designing instructional activities so as they assure the achievement of objectives by all students) [15].

The quantitative empirical studies focusing on the issue may be grouped, according to the results obtained, into three major categories that are presented in Table 1.

Empirical studies focusing on differentiated instruction

Table 1

Categories of results	Empirical studies
Differentiating instruction upon personal learning styles leads to an improvement in the level of learning results	Abraham (1985) [1] Bajraktarevic, Hall & Fullick (2003) [5] Dunn et al. (1995) [11] Easter (1994) [12] Felder (1993) [13] Ford & Chen (2001) [14] Marshall (1991) [20] Mickler and Zippert (1987) [22] Nelson et al. (1993) [24] Tulbure (2010) [32]
Differentiating the strategies of instruction upon learning styles does not affect the level of learning	Akdemir & Koszalka (2008) [2] Cook, Thompson, et al. (2009) [10] Massa & Mayer (2006) [21]
The lack of concordance between learning styles and didactic strategies stimulates and makes the learning process flexible	Baker et al. (1988) [6] Cavanagh & Coffin (1994) [9] Kowoser & Berman (1996) [18]

Based on the information synthesized in Table 1 we see that most of the studies we have identified in the specialty literature reflect the superiority of differentiated instruction over the whole-class instruction, from the point of view of results obtained by students in the learning process. From this perspective our synthesis offers conclusions that align to the one presented by Nichols [25], who sustains that the number of studies proclaiming the superiority of the learning results in the process of differentiated instruction is greater than the number of

studies indicating that learning is more efficient if there is some discordance between predominant learning styles and teaching strategies. Despite these arguments, our synthesis should be interpreted with caution as, first of all, it is not exhaustive and consequently it does not include all the studies concerning these issues. Secondly, there has been found empirical proof to support the claim that differentiating instruction upon personal learning styles does not lead to any improvement in the level of learning results, meaning that between students

involved in differentiated instruction and those receiving whole-class instruction did not appear significant differences on the level of results achieved within the learning process [10], [21]. Leaving from the results of experimental studies, some researchers think that the empirical proof coming to sustain the superiority of the differentiated instruction over the traditionally one is still insufficient at the moment [2], [19], [27], [28]. Thirdly, the issue under discussion is more controversial as there is more research sustaining exactly the opposite hypothesis according to which, the disagreement between teaching strategies and the predominant learning styles would have some beneficial effects on the learning process [6], [9], [18]. In these circumstances, we consider that an extension of our investigation by including a larger number of studies in our analysis and implementing some experimental designs to test the mentioned hypothesis on certain categories of students would be necessary.

3. Conclusions regarding the differentiated instruction in higher education

(2) Differentiating instruction in higher education is currently an open issue. Despite the acknowledgement of students' diversity and the intention to increase everybody's chances to success, the attempts to respect and reevaluate the inter-individual differences are still small. The research has shown that the majority of professors are still making few efforts to adjust instruction in ways that would adequately respond to the academic diversity [31]. The results of studies concerning the impact of differentiated instruction upon the academic success on the level of tertiary education are controversial at the moment. There are researchers that sustain the hypothesis according to which the instruction adjusted

to personal learning styles contributes to the improvement of academic results [1], [5], [11], [14], of the attitude towards the learning activity [11], [13], [20] and of intrinsic motivation [8], [32]. In the light of these results, differentiated instruction presents the following advantages: it places the focus on the student in the instructional process; it allows flexibility on the learning tasks; it reevaluates and respects the differences between students regarding needs and favorite learning modalities; it provides equal chances to success for all the students.

On the opposite pole, there are studies which demonstrate that differentiated instruction has no positive effects on the academic success in higher education [10], [21]. Some researchers are even holding the idea that differentiated instruction would bring students some disadvantages, in a way in which frequent usage of the predominant learning style may lead to losing interest towards the learning environment [34]. Also, the constant adjustment of instruction to the learning preferences of the students may create later difficulties in adjusting to the whole-class instruction environment and may reduce flexibility in learning. On the whole, differentiated instruction in higher education stands as a challenge both for teachers and researchers. To demonstrate the superiority of this approach over the whole-class instruction we still need a great amount of empirical proof [27]. A valid solution to this controversial matter could be a combination of differentiated instruction with the traditionally whole-class type, a fact that would allow teachers to compensate the disadvantages of the traditionally approach through advantages offered by the differentiated approach of instruction.

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