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Individualisation, differentiation, and personalisation of learning in Slovenia: some historical and conceptual aspects

Abstract: This article examines the development and conceptualisation of the individualisation and differentiation of instruction and personalisation of learning in Slovenian and Yugoslavian educational theory from the middle of the 20th century to the present day. It highlights the most important developments in instructional approaches dealing with student diversity, focussing on the contributions of France Strmčnik, a prominent Slovenian didactician. Strmčnik's work on flexible differentiation is at the centre of the discussion, as he advocated for differentiation measures that balance common educational goals with individualised learning paths. The article traces how these principles have influenced Slovenian educational policy and practice, especially after Slovenia's independence in 1991. The concept of individualisation explored in the article involves adapting instruction to students' individual differences without fragmenting the collective educational experience. Differentiation is discussed as an organisational measure to support individualisation by dividing students into groups according to characteristics such as learning abilities, interests or motivations. The article also criticises the shift towards the personalisation of learning, a concept that has gained prominence in recent years. While personalisation promises to increase student engagement through tailored learning experiences, it also raises concerns about shifting responsibility for learning outcomes primarily to students, potentially exacerbating educational inequalities.

Keywords: individualisation and differentiation of instruction; personalisation of learning; comprehensive school; flexible differentiation; didactics

UDC: 37.091

Scientific article

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Introduction

One of the central theoretical and practical questions in didactics and curriculum theory is certainly how best to address the individual characteristics of students enrolled in the same educational programme (e.g. primary education). This question is addressed through concepts such as individualised instruction, differentiation of instruction and – especially in recent years – personalisation of learning.

This article discusses key considerations in individualised and differentiated instruction in Yugoslavia and Slovenia between the end of the Second World War and the first half of the 1990s, as well as in the years following Slovenia's independence in 1991. It focuses on efforts and solutions in the field developed and advocated by France Strmčnik, professor of didactics at the Faculty of Arts of the University of Ljubljana, who was intensively involved in this topic from the first half of the 1970s to the end of the 1990s (cf. Strmčnik 1976; 1987; 1993).

The concept of *individualisation*, which Strmčnik understands as one of the fundamental didactic principles (cf. Strmčnik, 2001, p. 377), aims at planning and implementing instruction that considers the differences between students as much as possible, thus enabling them to optimally realise their aspirations and potentials. However, it is not possible to fully individualise instruction, and it would be didactically and pedagogically counterproductive to understand individualisation as a measure leading to purely individual instruction. Ultimately, this would mean the end of the single-structured basic comprehensive school, and probably of any school insofar as it is understood as a social and socialising institution. Therefore, the goal is to take account of differences between individual students by implementing systemically and didactically sound measures of *differentiated instruction*. These are measures in the function of individualisation as a didactic principle and based on separating students into larger or smaller *homogeneous* groups according to certain characteristics (very often according to their learning abilities, but the criteria for differentiation might also be other characteristics, such as interests, motivation or aspirations). Much has been written in Slovenia, especially in the 1990s, about the legitimacy of various differentiation measures

(see, for example, the *White Paper* (Bela knjiga ... 1995) and a number of theoretical debates, among which Plut-Pregelj 1999; Strmčnik 1999; Kovač Šebart 1999; cf. also the overview of the controversies in Kovač Šebart 2002).

In recent years, a concept of the *personalisation of learning* has been increasingly gaining ground in Slovenia. Although its meaning might seem similar to that of individualised instruction, crucial distinctions between the concepts should not be ignored. I will devote a few words to explain the important theoretical and practical distinctions in the last part of the article.

Individualised instruction in Slovenian and Yugoslav didactic theory of the second half of the 20th century

On the one hand, the phenomenon of individualisation can be viewed from a *narrow didactic* perspective, showing how it is understood in didactic theory as a general *didactic principle*, while on the other hand, the didactic derivations of individualisation are closely linked to broader conceptions of the meaning and role and, more generally, of the concept of the comprehensive basic school. As I have shown (Štefanc 2023), it was only in the 1960s and 1970s that the concept of *individualisation of instruction* became explicit in the Yugoslav and Slovenian didactic literature. For example, Šilih (1961), while explaining the principle of individualisation, draws on discussion by Šimleša, in which he stressed that two aspects of individual differences between students should be taken into account in teaching: first, students have developmental, personal and socially conditioned differences; second, individualisation is part of the educational purpose of school itself, since a "comprehensively and harmoniously developed personality" must not be individualistically oriented but, at the same time, not uniform either (ibid., p. 76; cf. also Schmidt 1982; Lesar and Ermenc 2017). The principle of individualisation was therefore understood – early in the 1960s – as a principle that required both consideration of individual differences at the level of the didactic *process* and, at the same time, individualisation as the *aim* of educational endeavours. The didactic implementation of this principle required the teacher to *get to know the students* and, accordingly, to *adapt teaching* and instruction to the specific characteristics of each group of students and to their individual characteristics. The requirement for teachers to get to know their students was, first of all, a criterion for teachers to understand, in particular, the characteristics that govern the cognitive development of students at different stages of this development (Pataki et al. 1953, p. 161; Krneta 1974, p. 187; also Šilih 1961, p. 76), but authors in this period pointed out that this was not sufficient for high-quality individualised instruction and that it was a misconception that instruction could be tailored to the needs of an imaginary 'average' pupil. For this reason, a relatively large amount of attention was paid to getting to know *individual* students, and practical guidance to teachers led to practices that today should be considered at least controversial, if not unacceptable: Schmidt (1951), for example, advises teachers to observe students and analyse the conditions in which they live (ibid., p. 1). Similarly, Pataki

et al. (1953) advocate that the teacher "make a comprehensive study" of their students, "their psychological characteristics, their state of health, the conditions in which the children live at home" (ibid., p. 163). Šilih (1961) advises the teacher to "collect the data in a special observation notebook and later generalise them into carefully verified findings and judgements and enter them in a personal psychological inventory or, better still, in a special dossier" (ibid., p. 77). Today, these are practices that are extremely sensitive in terms of the collection of personal data and the invasion of children's and families' privacy, as I have already discussed (Štefanc 2003).

While individualisation in the Slovenian and Yugoslav didactic literature of the first post-war decades is well accepted, most authors also warn against either a problematic understanding or an over-implementation of individualisation. Poljak (1970), for example, links the principle of individualisation with socialisation and emphasises: "Insofar as the individuality of the pupil must be developed, this must not lead to the breaking up of the collective and to the formation of individualism" (ibid., p. 207). Šilih (1961) also warns against ignoring the difference between "individualised and individualistic education" and, in this context, writes that the latter "leads to individualism, which is hostile to the idea of community and also harmful to the personal growth of the individual" (ibid., p. 207). Similar warnings are given by other authors (cf. Ozvald 1927, pp. 30-35; Danilov and Jesipov 1961, p. 154; Krneta 1974, p. 190; Bognar and Matijević 1993, p. 35).

Differentiation of instruction as an organisational measure in the function of individualisation

The fact that quality individualised instruction can be achieved through well-thought-out differentiation measures is emphasised by Šilih (1961), who – while rejecting external differentiation in compulsory education – calls for *internal* differentiation at the level of classes, which is, according to him, only possible if the number of students in the class is limited to approximately 25 to 30 (ibid., pp. 78-79). Such internal differentiation can be achieved through the implementation of didactic measures while delivering instruction in the class, e.g. by combining different teaching methods, materials and teaching forms, in particular group work and individual work (ibid., p. 79; Franković, Pregrad and Šimleša 1963). In addition, it can be achieved by implementing differentiation measures at the grade level, such as supplementary instruction for students with learning difficulties and advanced instruction for gifted students (Poljak 1970, p. 206). Schmidt (1951) notes that the principle of individualisation is more easily implemented in the lower grades of primary school, since a teacher who teaches most subjects to a smaller number of students gets to know them better than a teacher at the subject level or in upper secondary education who usually teaches larger numbers of classes (ibid., p. 190).

It should be stressed that the individualisation and differentiation of instruction in Yugoslavia and Slovenia was not only a didactic issue but also a significant

systemic and political, even ideological issue, directly linked to the question of the duration and design of single-structured comprehensive basic education. Systemic answers to the questions of how many years it should last and how comprehensive basic education should be designed depend on pedagogical and political considerations of the differentiation measures necessary to address the differences between students (see Bergant 1970; Schmidt 1982; Medveš 2015; Štefanc 2021). However, it is evident that Strmčnik, when he began his research in this area in what was then Yugoslavia, did not enter a completely empty theoretical field. That said, he was definitely the first to address the issue of the differentiation and individualisation of instruction in a systematic, in-depth manner. As early as the 1970s, he articulated key arguments on the meaning, role and characteristics of the individualisation and differentiation of instruction in compulsory education (cf. Strmčnik 1976). In the following decade, he significantly expanded, systematised and extended them with a comprehensive comparative overview of didactic and systemic differentiation solutions in a number of countries (Strmčnik 1987). At the beginning of 1990s, he updated and supplemented his work in light of experiences with differentiation in school practice and in light of social- and policy-related circumstances (cf. Strmčnik 1991; 1992; 1993; 1999).

Strmčnik's concept of flexible differentiation of instruction

Strmčnik's understanding of differentiation and individualisation was incomparably broader than in the debates that preceded him. He was a strong advocate of the single-structured comprehensive basic school and an equally strong opponent of premature *external* differentiation,[1] but he was well aware of the peculiar paradox of the comprehensive school: if it is to be truly comprehensive and if it is to provide equal educational opportunities for all students, it cannot last only four or six years but must involve students for a longer period. But if it is to last longer – eight, nine, or even more years – then it cannot remain the same and uniformed for all students because with each year of schooling, the differences between students grow wider and more complex not only in their learning abilities but also in their interests and aspirations. And if the school is to remain compre-

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1   When discussing differentiation of instruction, Strmčnik (1987) distinguishes between three so-called differentiation *systems*:
  – (i) *internal differentiation*, which largely corresponds to the idea of *within-class* ability grouping (cf. Slavin 1987; 1990); this type of differentiation is manifested by the teacher adapting didactic strategies and content while conducting instruction in the heterogeneous class;
  – (ii) *flexible differentiation*, which is manifested at the level of the *educational programme*, meaning that students are enrolled in the *same programme,* but the curricular activities allow them to move through it as optimally as possible, taking into account their individual characteristics (abilities, interest, aspirations, etc.); and
  – (iii) *external differentiation*, which is characterised by students being separated into *different programmes* of varying difficulty and most often with different options for further progression along the educational vertical; this type of differentiaton largely corresponds to the idea of *streaming* or *tracking* models described by Slavin (1990, p. 472).

hensive and not crumble under external differentiating social pressures, it must find effective ways of regulating and addressing these differences.

So how can we maintain a comprehensive school while sufficiently considering growing differences between students? Strmčnik seeks a solution to this pedagogical quadrature of a circle in differentiation and individualisation measures that goes far beyond those that didacticians before him dared to think of. If these remained more or less emphases on the teacher's need to adapt methodologically and performatively and to take into account the specifics of students, Strmčnik (1976) claims that "we can and must individualise the educational *objectives* and the associated educational *content* as well as the forms and methods of teaching, the pace of teaching and the educational relationships" (ibid., p. 116, emphasis added). With the idea of individualising not only didactic or methodical implementations but also the educational objectives and content, he opens up a sensitive issue and therefore devotes considerable attention to the question of an appropriate balance between the common goals and objectives to be achieved by all students enrolled in the programme and the individualised objectives to be achieved by only some of them. He emphasises that a comprehensive school naturally has general and common goals but that this does not necessarily mean "a uniform educational content, since the individualisation of the educational content does not mean a departure from the common educational goals" (ibid., p. 117).

This should be considered at the national curriculum planning level by allowing teachers to be flexible and autonomous enough in their lesson preparation and instruction in terms of content – and therefore, at least to some extent, in terms of objectives as well. In his opinion, no school subject should remain uniform "and planned in advance by some external authority, but also subsequently individualised" (ibid., p. 119). Even more, claims Strmčnik, we should search for ways to make the educational programme itself more flexible in relation to students and to offer more alternative, optional, elective subjects and activities (ibid.).

Strmčnik captures these efforts theoretically and practically in the concept of *flexible differentiation of instruction*, which he sees as a solution to the complex challenge of optimally considering the specificities of each individual student while at the same time maintaining a single-structured comprehensive basic school for as long as possible. Unlike external differentiation, which "separates students into different streams from a very early age, flexible differentiation brings them together for much longer, and adapts learning and teaching to individual abilities and needs through a varied mix of frontal, group and individual work" (ibid., p. 140) In other words, although students remain within the same programme – i.e. the single-structured basic school programme – this programme is no longer uniformly identical for all students but allows them to follow different paths through it, being more uniform in the initial years and then becoming more heterogeneous and flexible later as the programme tries to accommodate the growing differences between students. Strmčnik (1987) shows how broadly such differentiation is understood by presenting a number of *models of flexible differentiation* (ibid., pp. 235-264), among which he particularly advocates for the model of *successive combination of basic and multi-level instruction*, where students are in principle

grouped in mixed-ability classes, but in some subjects, they receive a minor proportion of lessons in separate groups at different difficulty levels. Although this model was later used as a synonym for flexible differentiation in Slovenian basic school, Strmčnik understands this as only one possible model of flexible differentiation: among others, he mentions individually planned lessons, project work, programmed instruction, team-based instruction, elective subjects, interest activities, supplementary and advanced instruction, etc. School acceleration can also be understood as a flexible differentiation measure (ibid.).

As flexible differentiation becomes more complex, so do the systemic and curricular conditions needed to implement it. Strmčnik points out in the 1970s that high-quality flexible differentiation requires well-trained teachers, school counsellors and educational advisers at the national level (Strmčnik 1976, pp. 150-151). However, even well-trained teachers and counsellors find it difficult to implement flexible differentiation measures in the absence of appropriate curricular and systemic foundations. Strmčnik thus raises the question of how the educational programme and its curriculum documents should be designed to support the planning and implementation of individual teaching subjects. Although he does not define "whether the syllabi should be more goal-oriented or more content-oriented" (Strmčnik 1987, p. 265), he nevertheless stresses the need for a meaningful graduation of educational goals and objectives. Since schools must "take into account social and individual educational interests", which "cannot be adequately expressed only by general educational objectives", it is "not only reasonable but also necessary, from the point of view of differentiation and individualisation, to divide the goals and objectives into *general or orientational, partial and operational ones*" (ibid., p. 266, emphasis by F.S.).

From individualisation and differentiation of instruction to personalisation of learning: conceptual considerations and dilemmas

At least for the last ten years, it can be said that the issue of differentiation and individualisation of instruction in Slovenia is no longer at the forefront of scientific, didactic and school policy considerations. However, an increasing number of discussions in Slovenia are drawing attention to a concept that apparently wants to occupy the space where the concept of differentiation and individualisation of instruction has been established for decades: the concept of personalisation (Nolimal 2015; Bone et al. 2022; Štimpfel 2017; Ažman and Zavašnik 2019; Slivar et al. 2021; Mihelič and Zore 2021). Personalisation seems to be penetrating the Slovenian didactic and pedagogical field without in-depth theoretical or at least conceptual considerations. One gets the impression that it has become part of the didactic discourse in Slovenia simply because it is a concept that has established itself in international policy documents and some research. As such, it brings with it an air of novelty, modernity, perhaps even innovation, and is therefore worth including in our professional vocabulary, even if it is not necessarily clear why we do so and how it actually differs from established theoretical and conceptual

solutions. We have come across a number of writings by various authors in which personalisation is simply used as a term attached to differentiation and individualisation, for example:

"Teachers should implement internal differentiation, individualisation and personalisation to maximise student outcomes" (Štimpfel 2017, p. 35).

Or:

"Opportunities are seen in greater flexibility of programmes, or systematic and planned differentiation, individualisation and personalisation" (Grah and Rogič Ožek 2016, p. 19).

The term 'personalisation' is also used in some institutional documents without its content being explained in more detail and appears, in particular, in connection to references to the individualisation of instruction. For example, the term 'personalisation and individualisation' appears several times in the Summary Reports of the Curriculum Analysis Groups for Primary and Secondary Schools (see Slivar et al. 2021, p. 93), as does the phrase 'individualisation, differentiation and personalisation' in a document from the Office for the Development and Quality of Education in the Ministry of Education and Science (Radovednost je lepa ... 2020, p. 46). This raises the question of what we actually mean by personalisation: Given the writings that simply associate this concept with differentiation and individualisation, one would conclude that it is a concept that is in some way semantically related to them; however, since it appears as a separate signifier, this suggests that it is also semantically separate. So how can we understand the difference between the differentiation and individualisation of instruction, on the one hand, and personalisation on the other?

Personalised learning and the problem of shifting responsibility for learning performance

According to D. Burton (2007), the beginnings of the concept can be traced to English school policy shortly after 2000: in describing the influence of educational psychology on education and classroom practice, she shows, among other things, that psychological theoretical constructs and empirical data relating to, for example, metacognition, brain function, learning styles and multiple intelligences not only informed much of the thinking about legitimate pedagogical and didactic approaches but also formed the basis for the promotion of the concept of personalised learning, based on the work of one of the government's key advisers, namely C. Leadbeater, author of *Personalisation through Participation: A New Script for Public Services* (Leadbeater 2004). This makes at least two things clear: firstly, that the concept of personalisation as it was introduced into educational discourse refers primarily to learning processes and that therefore authors who

use it are not usually talking about personalisation in general but about the personalisation of *learning*. Secondly, since learning is primarily a subjective process, the emphasis on learning as a key process to be promoted by the school results in shifting the responsibility for the acquisition of knowledge, and consequently for learning performance and the quality of education, to the learner. The logic is as follows: The task of the school is no longer the transmission of knowledge, because according to constructivist understandings, knowledge is a subjective construct, and it is therefore not the task of the school and the teacher to impart knowledge but to create the most optimal conditions for the student to master (i.e. "learn") their own learning. However, this also means that the only actor who can lead the learner to knowledge is actually the learner her/himself. Therefore, it is ultimately the learner's own responsibility how much knowledge they acquire, how good that knowledge is, what impact it has on their education and so on. Just as Leadbeater (ibid.) envisions that citizens, through their participation, take responsibility for ensuring that public services are as well tailored to their needs as possible and thus become more personalised and of higher quality (see also Reeves 2014), learners too should take responsibility for their own learning and learning performance through the concept of personalised learning. This is directly articulated in the Slovenian context by, for example, Mihelič and Zore (2021), who write: "The concept of personalisation comes from a space where learning is at the forefront, while teaching in the classroom is seen as a 'service' to learning; the learner is responsible for their own learning, the teacher more or less supports them" (ibid., p. 51). Also interesting in this context is the emphasis on personalised learning in the after-pandemic *Recovery and Resilience Plan*, which de facto forms the basis for systemic and curricular change in the coming period: "Personalised learning ensures a holistic, informed and active role for the individual, both in planning learning (objectives, performance criteria), in learning personalised and person-centred approaches, and in peer and collaborative learning (with classmates, teachers or external experts)" (Načrt za okrevanje ... 2021, p. 358).

This is quite consistent with tendencies observed in recent decades that are based on a conception of teaching more or less as organised learning, which is part of the processes that Biesta (2013; 2020) refers to as the learnification of education. The fact that the focus in education should shift from teaching, especially direct teaching, to learning is in fact not new in Slovenian professional circles either: for example, in her criticism of differentiated instruction in the nine-year basic school, L. Plut-Pregelj (1999) points out that "learning is always an individual process" (ibid., p. 1) and that the teacher and the school should only be "indirectly responsible for the learning outcomes" of students, i.e. "for the organisation of the learning process in the classroom, for creating good conditions [...], but it is and must be the student himself who is responsible for the learning outcomes" (ibid., emphasis L.P.P.) Such views tend to be highly problematic precisely from the point of view of the individualisation and differentiation of instruction: namely, the didactic understanding of individualisation is based on the assumption that the key to success lies in the conduct and responsibility of the teacher who plans and leads the instructional process. This is emphasised not only by Bognar and Matijević

(1993), for example, when they define individualisation as "a means of optimising teaching" (ibid., p. 167); a good four decades before them, a leading Yugoslav and Slovenian pedagogue, V. Schmidt (1951), had written clearly in this context: "We must resolutely fight against attempts to discover the negative sides (lower abilities, bad character traits) in students so that the teacher can justify the failure of his work with them in teaching and education" (ibid., p. 192). Individualisation measures are thus to a large extent linked to the teacher's teaching and not primarily to the student's learning. Of course, this does not mean that the quality of learning is unimportant or that individualisation has no influence on how a student learns, but from a didactic perspective, the immediate object of individualisation measures is the process of instruction and the teacher's didactic behaviour, for which the teacher is also professionally responsible. Strmčnik also does not hold a reductionist view of instruction as merely a process of organised learning (cf. Strmčnik 2001, pp. 100-102). He agrees even less with the view that responsibility for learning outcomes could be attributed primarily or solely to learners, which would even contradict the actual core understanding of the didactic meaning and role of individualisation. He always emphasises that "a pupil's learning performance [...] depends on a whole range of factors. In particular, it depends to a large extent on the direct and indirect optimal instructional support provided by the school and by others who can provide such support" (Strmčnik 1976, p. 121). In this context, he also writes that "we must be against leaving students to their learning abilities and their learning conditions and then automatically lower the educational expectations on the basis of what the students can achieve on their own, without teacher's optimal support" (ibid., p. 126). It is therefore no coincidence that he explicitly argues in favour of the need for direct instructional support from the teacher (cf. Strmčnik 2001, pp. 104-105).

Personalisation of learning as an integral part of the technologisation and digitalisation of education

However, an equally important aspect of the quest for personalised learning, which is closely linked to the increasing use of modern, computer-based technologies in education, should not be overlooked. A number of authors and education policy documents link the concept of personalised learning to the technologisation and digitalisation of education. The assumption behind this is that modern technological solutions and tools can be used to tailor learning to each individual and their learning needs, interests and aspirations.

Already in the first decades of the 20th century, Pressey saw in the first learning machines the potential to relieve teachers of routine teaching tasks so that they could concentrate on more complex pedagogical and didactic tasks; Skinner followed the same line of thought in the 1950s (cf. Petrina 2004; Watters 2021). However, the functionality of such machines at that time was simply too limited to play a significant role in learning and teaching. But after several decades of development in computer-based technology and artificial intelligence (AI), we are

witnessing a significant increase in the effectiveness of both hardware and software, which, by processing large amounts of data and using complex algorithms, performs learning analyses that can guide individuals through the learning process, suggest the most optimal learning steps, check their work, support teachers in lesson planning and, as Selwyn (2019) writes, even guide teachers on what to say and do in class, and how (ibid., p. 72). All this with the aim of personalising learning as effectively as possible, which is eventually the purpose of so-called personalised learning systems that guide learners as they interact with online learning resources in a virtual environment (ibid., p. 74).

As early as 2010, the high-tech company Motorola highlighted the importance of personalisation in education in its white paper, quoting educational consultant Tom Greaves of The Greaves Group: "The problem with improving student performance in today's educational system is that there's a lack of personalization. /.../ By providing more compelling, more motivating, more personalized educational environments designed to improve student performance, e-learning applications and high-speed wireless network solutions are poised to revolutionize education" (How Technology is Changing … 2010, pp. 3-8).

Unsurprisingly, the trend towards personalisation of learning is particularly pronounced in the higher education sector, which also relies heavily on individual learning, which postsecondary students are more willing and able to do than secondary students. That technology is one of the key enablers of a personalised learning experience in the context of higher education is also argued by Blaschke (2018), who cites a number of authors who see significant potential in such personalisation: Personalised, non-linear learning environments should support exploration, learner-determined learning, promote the creation and sharing of information and knowledge, enable participation in the co-creation of new information and knowledge, and promote lifelong learning in general (ibid., p. 133). As Smale and Regalado (2017) write, such a "responsive and personalised learning ecosystem" should significantly promote academic success (ibid., pp. 3-4; cf. also Mistree et al. 2014; Gosper and Ifenthaler 2014).

In this context, a fundamental question is what implications and consequences the personalisation tendencies described above have for the quality and equity of education systems and the processes that take place within these systems and that are crucial for the education of students. Williamson (2013) is very illustrative in this regard, as he likes to describe learning as a consumption activity that is not fundamentally different from other types of consumption but which is necessarily personalised by its logic. In this context, the author writes, it is necessary to emphasise the importance of lifelong projects as a "new and continually ongoing state of mind in a "cut-and-paste curriculum" orientated by individual self-responsibility, personalization, and technology-based child-centeredness, with students encouraged to make 'a planning office for themselves'" (ibid., p. 98).

The logic advocated by Williamson in this account is almost diametrically opposed to the aforementioned ideas of Strmčnik, who, as I have shown, does not advocate the thesis of students' primary (or even exclusive) responsibility for learning and learning outcomes.

From a much more critical distance, Selwyn (2019) describes the example of the popular "Knewton system" in China (see also Yu 2018), which uses AI to closely monitor each user's activities and suggests the most optimal learning path for each individual based on analyses of big data corpora: "Once a student is logged onto a course or tutorial through the Knewton system, the platform's data engine monitors every interaction that the individual has with the computer. This data is used to model various aspects of the learner's performance, such as their motivation and proficiency, as well as estimations of 'learning style'. These learning profiles are then used to recommend the most appropriate educational resource that the student should use next" (Selwyn 2019, p. 74). The company that promotes and markets the system believes that it helps students achieve better learning outcomes and better prepare for the rigours of university entrance exams. This, Selwyn writes, has also made it an exceptional selling point in the highly competitive Chinese school environment, and it is particularly coveted by parents who want to give their children an edge over others (ibid., p. 5). The author points out that such an AI-powered personalised learning system can likely contribute to better learning outcomes for some students, but especially those who are otherwise highly motivated, responsible and persistent learners. However, it should not be overlooked that these are personality traits that are more likely to be observed in students who come from more stimulating environments (cf. ibid., p. 83). These students are thus doubly privileged by the logic of personalised learning, which implies not only the assimilation of high technology but also a high level of motivation to learn and academic ambition: firstly, by being able to afford such technological systems in the first place, and secondly, by being able to take full advantage of them due to their other personal characteristics (and of course other favourable circumstances).

This will be all the more problematic – also from the point of view of educational equity – as the trend towards technology-based personalisation of learning will gradually lead to the dismantling of public education and institutional education systems. If it is true that personalised learning is sufficient in place of a complex education and instruction system, if it is true that such learning must meet the interests of each individual who chooses what he or she "needs" in a consumerist manner, and if it is true that such learning is possible at any time and in any place, even in purely virtual environments, by means of computer-based technological solutions – then why would we still need an institution such as a (public) school? In the age of audio and video streaming services, learning management systems and other online platforms can quickly appear archaic and obsolete. More than a decade ago, K. Facer warned of precisely this danger: "Taken to their logical extreme, such discussions are leading to suggestions that the school itself should simply be dissolved into the learning landscape and replaced by personalized learning environments" (Facer 2011, p. 27). However, it should not be ignored that this would have serious consequences for ensuring educational equity because, as the author points out, "public educational institution may be the only resource we have to counter the inequalities and injustice of the informal learning landscape outside school. The school is also potentially the most powerful

local institution we have to help resist possible futures of breakdown and dispossession /.../ The local, in other words, is a place where we are forced to learn to live together and in which important decisions are made. All of these reasons suggest the need for a public education institution rather than a landscape of atomized, personalized learning environments" (ibid., pp. 28-29).

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Acknowledgement

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INDIVIDUALIZACIJA, DIFERENCIACIJA IN PERSONALIZACIJA UČENJA V SLOVENIJI: NEKATERI HISTORIČNI IN KONCEPTUALNI VIDIKI

Povzetek: Članek obravnava razvoj in konceptualizacijo individualizacije in diferenciacije pouka ter personalizacije učenja v slovenski in jugoslovanski pedagoški teoriji od sredine 20. stoletja do danes. Izpostavlja najpomembnejše dosežke na področju didaktičnih ter sistemskih ukrepov, ki pripomorejo k individualizirani in diferencirani obravnavi različnih učencev, pri čemer se osredotoča zlasti na delo Franceta Strmčnika. V središču obravnave je Strmčnikov koncept fleksibilne učne diferenciacije. V prispevku je predstavljeno, kako so Strmčnikova prizadevanja na tem področju vplivala na slovensko vzgojno-izobraževalno politiko in prakso, zlasti po osamosvojitvi Slovenije leta 1991. Učna diferenciacija je v prispevku obravnavana kot organizacijski ukrep v podporo individualizaciji pouka, ki temelji na ločevanju učencev v homogene ali manjše heterogene skupine glede na učno relevantne značilnosti, kot so učne zmožnosti, interesi in aspiracije. Članek kritično obravnava premik k personalizaciji učenja, ki se kot razmeroma nov koncept uveljavlja v zadnjih letih. Čeprav naj bi bilo s pomočjo personalizacije učenja mogoče bolj učinkovito približati izobraževalno izkušnjo učencem in njihovim specifičnim potrebam, gre za koncept, ki bi lahko vplival na povečevanje neenakosti na področju vzgoje in izobraževanja.

Ključne besede: individualizacija in diferenciacija pouka; personalizacija učenja; enotna šola; fleksibilna diferenciacija; didaktika

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