Critical Thinking Of Students – Indicator Of Quality In Higher Education

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Abstract

The text discusses the impression that the Bologna reform puts studies in a paradoxical situation emphasizing the need for critical thinking, as the most significant teaching aim, while, on the other hand, it actually leaves little space to reach it. The descriptors of European qualification framework provide legitimacy for critical thinking-oriented models to be developed within higher education teaching, but the step from rhetoric to reality seems to be too big. Basic findings of an explorative research (purposive sample, N=204): students estimate their critical thinking development level as high, but it is found that it had not been manifested in the situations demanding the application of the very same aspects, which can be considered a significant indicator of higher education quality indicator.

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1. Introduction

1.1 Theoretical Framework and Notional Determinations

Subordinations of university, research and lectures to economic logics and the law of capital has been in the core of current discussions in academic public in Serbia today. Discussions are the direction of the attitudes of Prado, (2012) who thinks that spiritual work in general is subjected to the laws of trade, while this is, according to his view,
the attempt of annexation, relying on neo-liberalism, considered to be in a serious crisis worldwide. Discussions in Serbia agree with the attitudes of the mentioned author that freedoms and responsibilities of universities in the reform within the Bologna process have been marked by financial and managerial reflections, as well as that the process has actually led to control of knowledge creation and transfer, i.e. the imperative of maximising of competence abilities and financial profit, while critical potential has been neutralized. From the angle of situation in Serbia, this leads to another question: what are the principles and to what an extent they are nurtured today in universities in Serbia, i.e. what are priority principles, or is the principle of unconditional autonomy manifested, what about the right to freedom of conducting research or giving lectures; from the standpoint of teaching and learning, this could be marked by the following question: what are didactical aspects of pluralism and intellectual autonomy in higher education teaching like; essence of autonomy implicitly involves not only full independence of university, but also the principle of independence of thinking and spiritual freedom, called autonomy.

2. Autonomy as principle

Autonomy is a principle, according to which spirit imposes itself its own law (nomos); thinking is its own ground thus managing each step it makes. The principle can also be called autarkeia indicating that the ancient schools of wisdom were the source of university, according to which the demand for self-sufficiency of spirit (autarkeis) is inseparable from the demand for autonomy (Ibid). This principle is decisive, since it implies that it is allowed to the one who things to get away from the facts, it allows him/her to make a distance, necessary for examination, analysis and evaluation, meaning that it is possible to criticize when needed, i.e. it prevents us to, due to brutal evidence of reality capitulate. In short: the principle of independence is an absolute condition for the effects of autonomy to be manifested (Little, 2000).

The definition of the notion of critical thinking involves independence from the field of a discipline it appears in. Facione, (1990) considers that the ideal of critical thinker refers to common curiosity, being well-informed, verifiability of reason, openness of thoughts, flexibility, straightforward thinking in evaluation, honesty and confrontation with one’s own personal prejudices, caution in decision making, industriousness in searching for relevant information, responsibility in classification of criteria, focus on examination and persistence in searching for solutions which are as precise for the subject as for the circumstances allowing the investigation (Ibid). Critical thinking is understood in a broader sense that the notion of scientific thinking, although both terms are in science used as synonymous. Critical thinking is beyond this and it is a significant aim of education manifested through various forms of conscious influence on quality of thinking, independence in decision making and rationality of action.

3. Critical thinking in Bologna declaration

What has for more than two centuries been thought for European system of studies, formed according to the model of German university, is that it has been trying to prepare students for independent, scientific and, finally, critical thinking. System of studies in which the transfer of systematic knowledge (lectures) is connected with the transfer of thinking competence and scientific work according to exemplary topics (seminars) makes the core of higher education teaching. Due to difficult years under sanctions, break up of the country, transition that has lasted for more than 20 years, the system in Serbia has undergone significant erosion, but it remained essentially the same. Only until recently the identity of majority of university teachers is still in accordance with Humboldt’s ideal of education, which is also true for teaching methods and procedures. According to the Bologna process in 1999 and supporting additional documents issued at ministry conferences at European level, changes have been driven, marked by increasing regulation of studies, which are mostly of structural nature, which has, at least in Serbia, been experienced as distancing from Humboldt’s concept of education. It has been assessed that in Serbia, like in universities in Europe, formality in realization of the Bologna process (European comparability, specification of success, studies being more structured) is directly connected with compression of contents of studies in order to make the duration of studies shorter, eroding old study and teaching culture (Kruse, op. cit). What we would like to emphasize when generally known Bologna process aims are in question, refers to the intentions to build a system of
Having said the above, it could be concluded that theoretical grounds of the research to be presented in the text refers to emancipatory didactics, which is considered to be open, due to the change of perspective – teacher – student – competence to be acquired (Zervakis/Wahler, 2007, as cited by Kruse, op. cit). The change of perspective assumes student-oriented lectures which more accurately consider their perspectives in learning, specifying the output; on the other hand, the notion of competence has for its aim to encourage not only knowledge but also complex abilities, which, according to the standpoint of O. Kruse (op. cit) is not new, having in mind that in Humboldt’s tradition teaching was oriented to competencies, which viewed studies, to much higher extent than it has nowadays been done within the Bologna reform, as a field of training and education of intellectual and methodological abilities. The very term competences is, at it was mentioned by the mentioned author, is new and initiates more intensive didactization of academic learning. Thus what is missing, and what was the essence of studies in Humboldt’s view refers to the following: students are no longer seen as partners in collaborative process of learning and research. They have become the object of didactics and they have disappeared as agents and personalities from learning arrangements (Ibid). What is, apart from competencies, also emphasized in reform of studies are standards of education (Klieme et al, 2007, as cited by Kruse, op. cit) which, as current approaches to quality of education, have introduced the culture of evaluation based on external control of outcomes grounded on mechanistically-technicistically oriented values and procedures, standardized philosophy and pedagogy, and finally economic logics; as a consequence, it is necessary to create a different concept of quality which ahs to be contextualized, implying that all the agents create common understanding of quality and search for more adequate ways how to reach it. Thus, what is trained are important competencies to survive, due to instrumentally oriented factography of examination demands, while critical and independent thinking is hardly even a part of the whole picture (Kruse, op. cit). While real development in higher education field goes towards schoolarization, critical thinking is considered to be a central point in European developmental policy. According to formulation of descriptor systems educational framework is created, which should define quality demands in the whole Europe unanimously (www.jointquality.org). In the last step of defining of qualification framework for life-long-learning (European Council, 2008), descriptors are classified at five levels, out of which the levels 6 – 8 refer to study cycles 1 – 3 of higher education. Learning results are described in them in the headings knowledge, competence and professional qualifications. Comments on European qualification framework ad defining of complexity of levels are in favour of the statements that the pre-established aims have only been reanimated, those that are in accordance to Humboldt’s traditions, but it is also stated that the conditions of study framework, created by the Bologna process, are not in accordance to the aim of qualification framework.

4. Didactics of critical thinking and intellectual autonomy

It has become clear today that critical thinking is not a unique competence; it is rather mastering of a technique, which as such cannot be neither taught nor trained in teaching. Critical thinking essentially means to leap out of usual currents of thinking and to learn how to further examine or re-examine something which has already become generally accepted knowledge. At the same time, this is not only about formation of competencies, it is about
personal development, which can have critical attitude in learning about reality, critical thinking, considering from several angles, evaluating from more aspects, searching for other solutions, verifying, checking… (Kruse, op. cit). European qualification framework gives legitimacy for curricula to be explicitly oriented towards education of critical thinking. On the other hand, it does not offer guarantees that it will be developed, having in mind that in order to nurture critical thinking it is necessary to have didactic support suitable for encouragement of intellectual autonomy of students.

Didactics acknowledges numerous procedures and methods developing critical thinking, and as a consequence, intellectual autonomy, which have survived in the conditions of Bologna. However, there is no automatism according to which the stated didactical possibilities really cause critical thinking, having in mind that their effects depend on curricular circumstances, as well as the assumptions, i.e. motivation of students. In other words, what has to be born in mind is that the very research competence cannot be dogmatically transferred, so that teaching can sometimes scare, rather than give wings to thinking (Siegel, 1988, as cited by O. Kruse, op. cit). Furthermore, scientific writing, regardless of how helpful it is for the development of independent thinking, can seem frustrating and intimidating without sufficient instruction or motivation, of if it a student does not see it as a task he/she can do. Peer interaction can turn out to be useless ritual, if it is not directed to creative and just communication. Seminars can also be abused as knowledge processors, rather than activity educating critical thinking. In other words, it is necessary to pay attention to thinking of participants and create such an atmosphere in which it is possible to experiment with the forms of thinking and opinions in a risk-free manner. Brookfield (as cited by O. Kruse, op. cit) deals with problems appearing if groups do not practice critical thinking. It such groups it is important to check the existing assumptions and statements and readiness to take risks, examine alternative thinking possibilities, allow diversity and opposing opinions, support spontaneity, offer models for being open in thinking and to critically analyse, to establish basic scepticism and avoid perfectionism. There already are well known strategies of teaching for all the stated (Brookfield’s list – for more information, see Gojkov, 2013), pointing out that teaching, arranged according to critical thinking, requires high communicative qualities of a teaching and depends on the creation of relationships between the teacher and the students. To open one’s own thinking for pedagogic approach is a risky decision students make only when they are supported in it. The attempts to empirically validate certain aspects of prior attitudes have been undertaken in the research presented in the paper.

5. Methodological framework of the research

The question underlying the present exploratory research refers to the verification of the thesis based on the claim that the Bologna reform has put university studies in a paradoxical situation, emphasizing the need for critical thinking as the most important teaching aim, while at the same time gives little space for achieving this aim. The research screened who students of Teacher Training Faculty of Belgrade University – Teaching Department in Vrsac and Preschool Teacher Training College “Mihailo Palov” in Vrsac (purposive sample, N=204), estimate the level of development of their own critical and this has been brought into relation with the real stated, assessing critical thinking of students. In such a way, an answer to a question was established referring to the level one of the significant indicators of higher education quality is developed. Assessment scale of evaluation (KM – construed for the occasion - Cronbach’s Alpha Based on Standardized Item, 921) was used for the need of the research; critical thinking was viewed according to the test for validating the level of critical thinking in learning strategies (SUS – also construed for the purpose of the research). Independent variables refer to the mentioned aspects of critical thinking, while dependent variables refer to the level of critical thinking according to the mentioned aspects. The research was carried out in 2013 using the method of systematic non-experimental observation. The correlation between the set of variables referring to critical thinking and the set of variables referring to learning strategies of students was researched according to canonical correlation analysis.

6. Findings and interpretation

Since we were interested in the relation between the assessment of the level of development of crucial thinking of students and their ability to apply it, the starting point of presentation of findings is the graph below showing the level of critical thinking development, as one of the most important indicators of intellectual autonomy.
Fig. 1. Graph: Assessment of the level of critical thinking development - [DataSet1] F:\ta.sav
VAR 2 – the level of logical thinking manifestation, VAR 3 – sceptical thinking, VAR 4 – independent thinking, VAR 5 – natural-learned thinking, VAR 6 – systematic, methodological thinking, VAR 7 – network, complex thinking, VAR 8 – self-reflexive and metacognitive thinking.

As it can be seen according to the graph above, students have estimated that sceptical thinking and network, complex thinking is most expressed in their critical thinking, followed by independent thinking. Systematic methodological thinking is least expressed, as well as self-reflexive and metacognitive thinking. Further statistical analysis has extracted only 1 factor, which could be taken as an indicator of high validity of the questionnaire, i.e. the expression of component unity, or well made choice of variables. In other words, it can be concluded that students estimate their own levels of critical thinking as rather high. However, the next graph has shown that this was not manifested in the situations requiring them to apply the very same aspects. Namely, in the tasks given in the test Learning strategies students have shown far lower level of success.

Statistical analysis if the relations within manifestation of critical thinking elements points out to the fact that the situation is a reverse picture in regard to the one students have on the level of their own critical thinking development. The graph shows that the elements of critical thinking which have had lowest manifestation are those which express the highest level of intellectual autonomy (VAR 8 – partnership participation in professional discussions – seminars, VAR 9 – avoiding critical thinking challenge, VAR 10 – intellectual autonomy). On the other hand, factor analysis has shown that the results were defined in three groups and that they were classified within cluster analysis in three basic sets, implying the confirmation of the hypothesis according to which there is a gap between the assessments of the level of one’s own critical thinking development and real manifestation of these abilities in the situations of problem dispute. The hypothesis is also confirmed by canonical correlation analysis according to which it has been found that there is medium expressed tendency that the greater success in text interpretation, making analogies and establishing of network of notions, the more sceptical thinking is, as well as more networked and complex.

7. Conclusion

The research has shown that students do not have objective view on their level of critical thinking, i.e. their view is in opposition to real achievements. The lack of critical thinking as competence of expression of intellectual autonomy in certain field, i.e. meta-competence, giving specific competencies their own course and sense, is a confirmation of the assessments according to which the Bologna reform has put studies in paradoxical situation, emphasizing the need for critical thinking, as one of the most significant teaching aim, while essentially leaving little space for achieving this very aim, as well as that the descriptors of European qualification framework, offering legitimacy to develop models oriented to critical thinking in higher education teaching, are actually nothing more but rhetoric, and the step between rhetoric and reality, at least according to the finding of the present research, is rather big; this is a significant statement leading us to think about higher education quality and emphasizing the need for not only different structural arrangement of studies (work with smaller groups, more mentor work, as assumptions of possibility to encourage critical thinking of students, implying more reading and knowledge acquisition), but also a different focus in knowledge transfer, oriented towards communication perspective. To
create critical thinkers is to develop personalities. They have to be partners in teaching and they have to become partners in professional discussions.

References


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