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CRITICAL THINKING IN CURRICULUM HIGH SCHOOL

Abstract

This essay introduces a comprehensive account of critical thinking that can be ascribed to the works of Richard Paul and Linda Elder, and presents guidelines and remarks that can be useful for teachers and instructors interested in designing and conducting an academic course of critical thinking. Philosophical roots of critical thinking, its perspectives and place in education, are also mentioned.

KRYTYCZNE MYŚLENIE W PROGRAMIE NAUCZANIA SZKOŁY WYŻSZEJ

Streszczenie

Artykuł stanowi wprowadzenie do uznanej koncepcji krytycznego myślenia przedstawionej przez Richarda Paula i Lindę Elder. Oprócz omówienia głównych założeń wspomnianej koncepcji, w tekście znajdują się wskazówki mogące zostać wykorzystane przez nauczycieli zainteresowanych stworzeniem i przeprowadzeniem kursu krytycznego myślenia. Ponadto, tekst podnosi kwestie filozoficznych korzeni krytycznego myślenia, perspektyw, jakie ono oferuje oraz miejsca jakie znaleźć może ono w edukacji.

Introduction

It is good to start with a definition provided by Paul and Elder:

Critical thinking is that mode of thinking — about any subject, content, or problem — in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities, as well as a commitment to overcome our native egocentrism and sociocentrism¹.

¹ *Our Concept and Definition of Critical Thinking*, retrieved from The Foundation of Critical Thinking website: <http://www.criticalthinking.org/pages/our-concept-of-critical-thinking/411>

Popular and valued in the West, critical thinking finds its place in kindergartens, schools of all levels, universities and vocational centers. There is a considerable number of theoretical books and handbooks written on it every year. Gradually, interest in critical thinking is growing in Poland too. In what follows I would like to introduce the concept in its most comprehensive understanding and show the crucial importance of the skills associated with the person's route through education and their entire life, and, finally, I would like to show how it can be practically exploited by its implementation in the curriculum of university students.

Critical thinking – introductory notes

Critical thinking has its roots in philosophy and psychology². However, the very notion can be misleading – “critical” in this context should not be misunderstood with the similarly sounding “criticising”, but rather connected with proper scrutiny, deep examination, and order of thought. Although the “career” of the notion in popular culture and mass media can be traced back only to the mid-20th century³, the idea of critical thinking appears to be as old as philosophy itself.⁴ Although the methods associated with it have changed little, the most important objectives of critical thought have been the same since the time of Socrates through to Saint Thomas, Descartes, to Dewey⁵ and Russell and the more contemporary academics Paul and Elder. The methods remain: to obtain clarity in thought, withholding poorly supported judgments, and, on the other hand, to apply systematic examination of a person's own beliefs and prejudices “inherited” with one's cultures, nurture, and claims. That being understood, critical thinking becomes even more important in the era of constant and rapid change, in a world of overwhelming information and contradictory claims, traditions, and interpretations that we encounter every day, both in day-to-day life and in academic pursuits. Critical thinking provides individuals not only with the tools that enable them to deal with the threats presented in contemporary life, but with the responsibility for decisions and beliefs, leading to a flourishing life.

² Cf. e. A., Fisher, *Critical Thinking*, Cambridge University Press, 2011; R. Paul, *Critical Thinking. What Every Person Needs to Survive in a Rapidly Changing World*, 2012.

³ Cf. R. Paul, *Critical Thinking Movement: 3 Waves*, retrieved from Foundation for Critical Thinking website: <http://www.criticalthinking.org/pages/critical-thinking-movement-3-waves/856>

⁴ R., Paul, L., Elder, and T., Bartell, “A Brief History of the Idea of Critical Thinking”, *California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Policy Recommendations*, State of California, California Commission on Teacher Credentialing, Sacramento, CA, 1997.

⁵ Dewey himself is “regarded as “>>father<< of modern critical thinking tradition” – cf. Fisher, op.cit., p. 2.

Critical thinking – the notion and tradition

What we can observe currently, where the notion I am discussing is grounded, is the so-called “third wave of critical thinking”⁶. The first wave of critical thinking, ascribed to the years 1970-1982⁷, can be described as a logical one, when the building blocks of critical thinking skills were made of formal and sometimes informal logics. Reasoning, formal models, and validity of claims were the notions one would surely meet in the handbooks of critical thinking. That was the validity of claims that researchers were looking for. Sureness, logical clarity. The second wave came together with the more profound development of psychology in the years 1980-1993⁸. This time the accent was placed on the other end of the continuum established by what extends between pure objectiveness of logical formal systems and vagueness of psychological structures – praised was that which was in some respect interesting, definitely not-logical, somehow relieving for minds tired with logics that is: heuristics, memory distortions, emotional phenomena and their impact on cognition. Easy to notice, first wave was basically normative, trying to teach how thinking should be, pursuing claims from an a priori stance, rather than investigating how it is in real particular minds, while the second was entirely descriptive: trying to draw attention to the wonderful facts from our cognitive framework. Currently, thankfully, we are said to live in the time of the third wave – when the balance is sought between normative and descriptive, between changeable and inescapable. Probably it is now easier to look for equilibrium, because the science now provides tools that can help us better understand the processes underlying both cognition and reasoning – the tools we can incorporate into critical thinking technics – and better adjust critical thinking skills and ourselves to the changing environment in order to process more successfully the information that we encounter.

Third wave

As it seems, the third wave of critical thinking presents its, by now, most profoundly developed form. Below I will therefore focus on its achievements, the most developed being the theoretical and practical works of Paul and Elder, putting aside for now all other historical and current manifestations of the phenomenon. This does not mean that the third wave is entirely a new pursuit – just the opposite – most of the concerns being raised right now were also raised in previous times. However, this account comprehensively covers important and justified concerns without favouring anything only because of the theoretical orientation. It cannot

⁶ Richard R., Paul, *op. cit.*

⁷ *Ibidem.*

⁸ *Ibidem.*

be denied that Paul and Elder's stance presents the more mature and developed conception of critical thinking established so far.

Paul and Elder's work is special particularly in one dimension: it encompasses the whole life and the whole education⁹. It begins with the mindset of a critically thinking person: influencing her own personal growth, her educational development and her maturation as a society member, capable of building a healthy and flourishing society. Indeed, properly understood critical thinking starts with the open-minded, non-judgmental stance. That approach to life and learning is probably best put in Paul and Elder's Valuable Intellectual Virtues. The latter – being *Intellectual Humility*, *Intellectual Courage*, *Intellectual Empathy*, *Intellectual Integrity*, *Intellectual Perseverance*, *Faith in Reason*, *Fair-mindedness*¹⁰ – draw one's attention to the wide range of attitudes one needs to embrace in order to strive to think critically. As equally important and indispensable, they encourage one constantly to question and recognise the limits of what one really knows, including consciousness of every man's natural egocentric dispositions and the possibility that one can be wrong being constantly alert (humility); to be not afraid of thinking for oneself, even if one's own justified reasoning leads beyond the mainstream (courage); being able and willing to try to understand another's points of view, even very distant from ours, constantly reminding ourselves that it is we who can be wrong (empathy); not to be hypocritical, to employ the same rigorous standards to ourselves and to others, actively checking whether what we claim is consistent with what we do (integrity); being conscious of the tiredness and frustration that the pursuit of critical thinking can lead to and, in spite of it, continue to fight for it in one's life and learning (perseverance); believing in the value of what people can reasonably establish for themselves (faith in reason); and finally, not favouring any views, any participants in debate, nor to hold any prejudices (fair-mindedness)¹¹.

As we can see, critical thinking starts here with (and finally ends with it also – the circle being closed) preparing the intimately personal ground for it – with shaping the mindset, attitude, and personality. Only after this is the critically minded person ready to seek understanding and acquire knowledge. Only by building on the blocks of valuable traits is one capable of understanding the real value of the necessity for checking the quality of reasoning about the issue or problem that she is going to ponder or study. That brings us automatically to Universal Intellectual Standards¹². It seems that the standards, listed below, are the core of Paul and Elder's conception of critical thinking and its teaching. Knowing the Standards, one is much less at risk of being misled in her undertakings – both practically oriented and theo-

⁹ See library they created with their works: <http://www.criticalthinking.org/pages/index-of-articles/1021/>.

¹⁰ Richard W. Paul, Linda Elder *Critical Thinking Handbook: Basic Theory and Instructional Structures* Foundation for Critical Thinking 1999, pp. 3-19 – 3-19.

¹¹ *Ibidem*.

¹² Richard Paul and Linda Elder, *The Miniature Guide to Critical Thinking Concepts and Tools*, Foundation for Critical Thinking Press, 2008, 8-9.

retical and, what interests us here the most – in the process of teaching and learning¹³, especially in the formal context of university.

Universal Intellectual Standards can be best understood as a set of questions one needs to ask oneself in the process of reasoning. They are aggregated under the names of: clarity, accuracy, precision, relevance, depth, breadth, logic, and fairness¹⁴. No one should be surprised that they somehow resemble the names of valued traits, however different be their structure. Clarity seems to be the first and fundamental condition for all the claims and questions. There is no possibility to answer properly unclear questions, because there can be nothing to answer. To ask whether there is sufficient clarity can be as follows: “Could you elaborate further on that point? Could you express that point in another way? Could you give me an illustration? Could you give me an example?”¹⁵ Standard of accuracy is concerned with the accuracy itself of the information conveyed and the possibility to check given claims; it asks: “Is that really true? How could we check that? How could we find out if that is true?”¹⁶ Precision asks: “Could you give more details? Could you be more specific?”¹⁷ Relevance demands that the statement is appropriate to the conversation, context, whether it is “about” the subject. Depth rejects superficiality in addressing issues. In order to be deep, a statement has to acknowledge adequately the complexities of the problem, taking into consideration its most important characteristics. Breadth demands considering other points of view and brainstorming the variety of other possibilities concerning the issue at hand. It asks: “Do we need to consider another point of view? Is there another way to look at this question? What would this look like from a conservative standpoint? What would this look like from the point of view of ...?”¹⁸ Logic here is to mean sensibility and internal coherence of a claim. It can ask: “Does this really make sense? Does that follow from what you said? How does that follow?”¹⁹ Fairness wants our reasoning to be free from bias towards our own interests: “Do I have a vested interest in this issue? Am I sympathetically representing the viewpoints of others?”²⁰ That was the core and heart of critical thinking. Below, I will consider how those standards develop into particular skills that can be taught and try to discuss briefly how it should proceed with the biggest possible gain for students and instructors.

¹³ Cf. R., Paul, L., Elder, *Critical Thinking Competency Standards*, The Foundation of Critical Thinking, 2007.

¹⁴ Richard Paul and Linda Elder, *The Miniature Guide to Critical Thinking Concepts and Tools*, Foundation for Critical Thinking Press, 2008, 8-9.

¹⁵ *Ibidem*

¹⁶ *Ibidem*

¹⁷ *Ibidem*

¹⁸ *Ibidem*

¹⁹ *Ibidem*.

²⁰ *Ibidem*.

Critical thinking as a subject of teaching – general remarks

According to Paul,²¹ the best way to learn how to think critically (and to learn content knowledge at the same time) is learn in action – that is, critical thinking techniques should be introduced and incorporated directly in the process of acquiring new, subject-specific knowledge. Surely, as the data and arguments provided by Paul and Elder are convincing, such conduct would be the most valuable way of acquiring knowledge. However, in the face of several difficulties and imperfections of the education system that are not of concern here, sound became the other possibility – of incorporating explicit critical thinking courses into the curriculum. Such courses would focus on certain skills irrespective of the subject content. In fact, critical thinking courses, together with so-called study skills, are the crucial part of the vast majority of curricula in Western universities and it seems that they are gaining more and more popularity at Polish universities too²². Leaving aside these facts, the question is what should such a course look like in order to realise the standards given by Paul and Elder, and be a residue of transferable skills that can really be of practical use by students in their academic and life pursuits? In the following I will ponder on a hypothetical syllabus of a critical thinking course at university, based both on the literature on subject and my own experience in designing and conducting such a course at the University of Warsaw²³.

Obstacles to a proper course design

Attempting to design a critical thinking syllabus can be a tricky task, especially for one raised in the tradition of the Lvov-Warsaw School, or more generally, an analytical one. There is a temptation to design such a course based on the solid ground of logic, and in consequence to change it rather into a course of logic (informal, at best), than critical thinking²⁴, what is neither the most effective nor the most exhaustive and honest way of introducing students to the notion, since it misses the focus on a valuable mindset and standards, that are inseparable from real critical thinking. However, critical thinking, as understood by Paul and Elder, should not be a very remote notion for the philosopher raised in the shadow of the Lvov-Warsaw School, just the opposite – the standard of clarity, requirement of argumentation being well-supported, or reasoning being sound and/or valid are deeply grounded in the

²¹ R. Paul, L. Elder, *Content Is Thinking, Thinking is Content. A Foundation for The Logic of Teaching*, retrieved from: <http://www.criticalthinking.org/pages/content-is-thinking-thinking-is-content/958>.

²² According to my own research.

²³ I would like to sincerely thank all the students of the course *Practical Introduction to Critical Thinking (Praktyczne wprowadzenie do krytycznego myślenia)* for their valuable comments and lively contribution to the process of teaching-learning.

²⁴ Interestingly, such conduct is tightly bound with the first wave of critical thinking. Historically focused researchers could infer that there is just the evolution of concept replaying itself in the new ground.

School's legacy²⁵. One just has to examine *critically* the School's specific claims and methods in the light of one's own knowledge and objectives as a critical thinking instructor, recognising also possible misconceptions presented by the School in the matter.

Critical thinking as a subject of teaching at university – objectives and modes of teaching

Coming back to Elder and Paul²⁶, the first objective of every critical thinking course should be to teach the students Universal Intellectual Standards (cf. section "Third wave"). Discussed traits and standards, when developed and internalised, are subject to further development of particular critical thinking connected habits and skills, that should be the subject of practical exercises at the content-non-specific critical thinking courses. To start my own pondering and advice for syllabi creators with the above criticised logic – it should be incorporated into syllabus, but not as the most important (and definitely not as the only) constituent of the course. With the help of formal and informal logic tools we can enhance and develop our realisation of logic standard, but only when the former would serve for the purposes of the latter, and not the other way round, i.e., as long as it really would help make sense of things, analysing and clarifying, not distorting claims and statements. Development of clarity, as often mentioned in the advice and works of semioticians and logicians²⁷, can be supported by scrutinised consideration of philosophical and other argumentative texts. Current media and information resources give us vast amounts of opinion and argumentative utterances that can serve as material for analysis. Such materials can be chosen by the instructor according to her own (and her students') preferences. In fact, press and Internet (e.g. blogs) texts can serve as good material for analysis, with examples illustrating clarity both negatively and positively. Such texts should also encourage training clarity in discussion, in providing arguments orally and in writing. Accuracy is an extremely important standard, one that requires training in proposing hypotheses and – through wisely lead discussion – departing from idle talk and verbosity; it is also helpfully supported by argumentative discussions. In order to obtain precision one has also to train skills that support proficiency in searching for (and picking up) relevant information in a variety of sources, and effectiveness in separating important content from these which can be neglected. Depth is probably the most subject-specific standard. It can be fully exercised only when one has adequately mastered the nuances of a particular domain; still,

²⁵ Cf. e. Jadacki, J. J., Polish Analytical Philosophy, Semper: Warszawa 2009.

²⁶ R. Paul, L. Elder, Universal Intellectual Standards, retrieved from:
<http://www.criticalthinking.org/pages/universal-intellectual-standards/527>.

²⁷ Here we can properly refer to some Lvov-Warsaw School texts in Poland on the one hand, and to Russell in Britain, for example, on the other, however, surely, not only philosophers acknowledge clarity; for – linguists and scientists can also be a fruitful point of reference.

however, it can incorporate transferable skills, as, for example, that of transferring the knowledge from one domain to another or analogical reasoning. Depth probably should be trained most extensively simply in the lessons of particular subjects and only supported in critical thinking classes. Breadth and fair-mindedness, however, can be perfectly developed purely by philosophical and ethical discussions and enquiries. What is it if not philosophy that encourages the one to encounter the multitude of possible worlds, when everything could be so different and I could not be myself anymore?²⁸ Putting simply, philosophical scenarios and thought experiments²⁹, followed by passionate, but structured and argumentative discussions are the best (and probably the cheapest) tools for encouraging broad and fair thinking in students. Summing up, that brief journey through the skills that underlie intellectual standards and through the ways one can influence their growth shows that, in fact, critical thinking can successfully be trained with the minimum of means, while the variety of materials come from various sources, with philosophically originated ones being favoured, but not required. These modest means can be seen as the advantage; however, this poses considerable challenges to the instructor of the course since she, even when choosing not to designing the syllabus but to use one prepared by some trusted source, is still responsible for extremely important counterparts of every critical thinking course – i.e., leading discussions and questioning. It is she in the classroom who is in charge of checking how the argumentation is being built, it is she who constantly monitors and analyses the processes of students' thinking – empathically, fair-mindedly, but according to Intellectual Standards, assessing their arguments and thoughts, supporting them in their development as critical thinkers. Such teaching is by no means a trivial task and requires a teacher-mastered ability to think critically. As Paul and Elder³⁰ put it: "If we want thinking we must stimulate it with questions that lead students to further questions". Critical thinking classes should be a space for the courage to ask and question everything, and for broad and deep and systematic analyzing as well as for integrating one's beliefs and convictions on a critical basis. It can also be a direct route to morality and ethics, whilst being inevitably free from any kind of indoctrination. Such a class should equip students in tools and skills that they can use in every domain of knowledge and belief, every subject they study and every real-life problem they encounter. Critical thinking, understood in that way, will prepare not only inquisitive adepts of academia, but morally integrated and mature citizens and members of society.

²⁸ Cf. B. Russel, *Value of Philosophy* [in:] *The Problems of Philosophy* London: Oxford University Press, 1973.

²⁹ One can perfectly well choose well-known philosophical thought experiments: Veil of ignorance, Truetempt, Twin Earth – are only examples.

³⁰ Richard W. Paul, Linda Elder *Critical Thinking Handbook: Basic Theory and Instructional Structures* Foundation for Critical Thinking 1999

Conclusions

Critical thinking, as a mode of thinking, as it was introduced in this essay, when attempted to be thought, is nothing like content-loaded subjects. For that matter, it requires a special approach from students, who would like to master it, from instructors that want to assist that mastering, and from those responsible for the shape of curricula. However, as I hope is clear from what I have written above, it is worth the effort, for the manifold advantages critical thinking brings to the lives of individuals, society, and academics.

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