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Critical Thinking: Tightening the Link Between Business and Education

ABSTRACT: This paper is based on the desk analysis of works dedicated to refocusing policy toward critical thinking skills and the socio-educational factors relevant to business. It argues that critical thinking (CT) capacity is important not only for problem solving but also, most important, for overall corporative success and for further development in business and the economy of the future. The paper discusses CT definitions, its position in educational policy and the global market economy, its relevance to business and its embedment in education.

KEYWORDS: critical thinking, business, education, development, labor market, economy, policy

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INTRODUCTION

The main thesis of this paper is that critical thinking (CT) skills are the most desirable skills in the workforce, essential for success in business and the economy of the future (Soroka et al., 2015). It argues that critical thinking skills reduce unnecessary risks; create an open space for improvement and innovation; aid Life Long Learning (LLL), and enhance “social capital” (c.f. Bourdieu, 1986; Coleman, 1988; Putnam, 2000). Furthermore, it proves that critical thinking is among the most essential assets of the labor market of the future and that leadership in education should refocus toward the development of critical thinking among students. This paper is based on desk analysis of existing empirical data and on accompanying meta theories. The framework for the findings aims to be thought-provoking and inspiring, for leaders in both business and education, who should work hand in hand for the benefit of future societies and for balanced growth.

The article derives from an interpretative research paradigm as an outcome of desk research analysis of secondary data. It is a theoretical piece based on literature review, founded on qualitative reductions and interpretations of existing data, concerning the universal impact of critical thinking on the economic and social success of key local and global market players. A reductionist approach in data analysis is purposely used to support the paper’s theoretical claims. The soft character of the evidence used in the paper should be treated as an attempt to build a conceptual framework for finding common ground between business and educational institutions of the future and to drive a symbiotic relationship. The overwhelming uncertainties of these times dictate a softer, more reflective outlook on changeable work environments and on market demands. This outlook is a coherent baseline corresponding with the topic of this paper.

CRITICAL THINKING (CT) AND REFLECTIVE JUDGMENT

Critical thinking (CT) has been considered one of the most desirable skills required for employment (c.f. Paul & Elder, 1999; Petress, 2004; Gardner, 2008; Casserly, 2012). CT may be characterized by the following five factors (c.f. *ibid.*):

- *trying to gain full, multifaceted information from alternative reliable sources with full awareness of the limitations on these sources (the authors' prejudices or personal biases; their ideological, historical, cultural and political grounding).*
- *Conducting a deep analysis of problems to make informed assessments and to choose the best possible solutions.*
- *Finding substantiated arguments for making a choice or a decision.*
- *Being open to counterarguments.*
- *Being aware of "contextuality" of knowledge.*

These factors are embedded in the uncertainty of human cognition, historicity and socio-cultural implications of any given knowledge. Furthermore, CT may be associated with an ability to reflect deeply and to make reflective judgment (Holtam, 2012), which is not rushed, but is thought through and supported by well-balanced, rational arguments, based on proven facts. Reflective judgment is an idea developed by King and Kitchener (1994), who created a model of seven stages of reflective judgment ability, measurable by a special scale they designed. This model's theoretical roots may be found in earlier works by Dewey (1933, 1982), who proposed that there is often doubt in sources of knowledge and a lack of certainty in resolving complex issues. The ideas of Piaget (1966, 1972) may also be traced back to King and Kitchener's model with his idea of developmental stages for assimilation and accommodation of knowledge. So can Kegan's concept of the importance of relationships with others in self-development (1982). These three thinkers had a noticeable impact on King and Kitchener's reflective judgment model.

Reflexivity may be captured within different levels of criticality, which in this case means reflective judgment is part of critical thinking. Ronald Barnett has synthetically listed critical areas in three dimensions: knowledge, self and world. (See Table 1 below.)

Table 1. Levels, domains and forms of critical being

Domains			
Levels of criticality	Knowledge	Self	World
4. Transformatory critique	Knowledge critique	Reconstruction of self	Critique-in-action (collective reconstruction of world)
3. Refashioning of traditions	Critical thought (malleable traditions of thought)	Development of self within traditions	Mutual understanding and development of traditions
2. Reflexivity	Critical thinking (reflection on one's understanding)	Self-reflection (reflection on one's own projects)	Reflective practice ("Metacompetence," "adaptability," "flexibility")
1. Critical skills	Discipline-specific critical thinking skills	Self-monitoring to given standards and norms	Problem-solving (means-end instrumentalism)
<i>Forms of criticality</i>	<i>Critical reason</i>	<i>Critical self-reflection</i>	<i>Critical action</i>

Source: Barnett, 2015, p. 64.

Reflexivity is expressed in terms of knowledge, first in the critical perception of one's own understanding and then, at a more individual level, in the ability to evaluate one's own ideas. The attempt to link reflexivity to the skills required in the labor market, especially in the context of conceptual work, seems to be very fruitful. It also meets management's needs regarding the characteristics of the workforce that are already required, and this need will continue to grow in the future. (See Critical Skills Survey, 2012, described in the next subchapter.)

The attempt by Bramhall et al. (Table 2) to conceptualize the CT components coincides with Barnett's line of thinking (Table 1).

Table 2. Components of critical thinking

Component	Skills required
Information-seeking	Inquisitive seeker of knowledge, truth and understanding identifies and searches relevant sources for evidence, and gathers data.
Analysis	Breaks down the whole into parts to discover function and relationships, with a systematic approach.
Evaluation	Makes judgments and draws issues based on reliable evidence.
Reflection	Contemplates own thinking, knowledge and assumptions to allow for a deeper understanding.
Creativity	Generates, discovers or restructures ideas; imagines alternatives.
Prediction	Predicts potential outcomes and consequences.
Discrimination	Identifies inconsistencies, distinguishing relevant from irrelevant, and recognizing differences and similarities.
Context	Considers background and influences relevant to an issue.
Perseverance	Pursues a course of action with determination to overcome barriers.
Flexibility	Able to adapt, modify or change ideas, processes and behaviors.
Open-mindedness	Tolerant or divergent views, identifying own beliefs and prejudices.
Knowledge transfer	Changes nature of form or function from one concept to another.
Confidence	Develops effective communication style; trusts own reasoning skills, with intuitive and insightful understanding.

Bramhall, et al., 2012, p. 325.

The individual components of critical thinking listed by Bramhall and others require specific but individual thinking skills that are difficult to develop in an education model based on knowledge transfer and knowledge enforcement. They are connected to the need to undermine existing patterns, and to the search for innovative ways of working that are different from standard solutions. CT and reflective judgment are a response to these expectations, drawing attention to individuals' subjective power. In this context, it is also worth bearing in mind the broad scope of "the idea of reflexivity itself,

demonstrating as it does, the need to be aware of one's ideologies and historicity" (Atkinson, 2000, p. 84). Earlier, James H. McMillan (1987, 1990) provided two comprehensive reviews of studies dedicated to the enhancement of reflexivity that was due to college attendance. In his papers, he merges reflexivity and critical thinking into one interchangeable category. Similarly, M. Brabeck (1983) associates the ability to reflect with high-level critical thinking skills. Paul (1984) writes about higher-order learning, based on deep understanding and reflexivity, as a means to produce knowledge, mental discipline and mastery of content.

CT and the highest levels of reflective judgment are similar and are not necessary for all of everyday life's functions, since many tasks are done automatically, without deep reflection (e.g., washing dishes, driving on an empty highway, mowing the lawn). However, thinking skills become invaluable when faced with a new, complex issue or problem. Such issues occur on an everyday basis in most work environments because of the complexity of human relations, human errors, sudden stock market changes, political turmoil and machine failures.

CT IN BUSINESS AND MANAGEMENT

Several studies of management demonstrate the relevance of critical thinking in choosing a leadership style and contend that the managerial style used should depend on the circumstances, requiring a high degree of flexibility and reflexivity in the leader (c.f. Barbuto, 2000; Bass, 1985; Fiedler, 1964). Moreover, a successful leadership style reflects the reflexivity levels of both the manager and the employees (Kuhnert & Lewis, 1987). Awareness of the latter may be helpful when choosing a relevant leadership style.

The main objective for business in the future is to build a strong baseline for the development of the intellectual and social capital, in order to enhance economic growth and the progress of science in any given country. This concept is embedded in the Sustainable Development Strategy of the European Union to support the principles of economic growth, social cohesion and environmental protection by enhancing critical and reflective thinking among educators and their students. Christopher Neck (2016) proves that successful problem-solving, in both smaller companies and multi-million-euro international corporations, relies on an ability to think critically and to carry out critical assessments. Chartrand, Ishikawa and Flander (2013) share this view and promote the CT-based business model "RED," in which R stands for recognizing assumptions, E for – evaluating arguments and D for drawing conclusions. They contend that CT can save companies from multi-million-euro losses and from critical errors harmful to their revenue and that threaten their existence. A U.S. survey of employers (2013) by Heart Research Associates clearly shows that CT rises to the top of the list of intellectual and practical skills employers expect from their employees. Of the employers surveyed in the United States, 93 percent expressed the belief that a "candidate's demonstrated capacity to think critically, communicate clearly and solve complex problems is more important than their undergraduate major." Moreover, an earlier survey of senior human

resources professionals indicated that they felt so strongly about the importance of CT over the next few years that it superseded the need for innovation and IT skills (2006). The growing importance of CT skills is demonstrated by number of articles dedicated to the topic in business press [c.f. “If it feels right” (The New York Times, Sept. 12, 2011), “How Will You Measure Your Life?” (Harvard Business Review, July–August, 2010), “Four decades after Milgram” (The New York Times, Dec. 29, 2008)].

A study of 768 managers and other executives, carried out by the American Management Association (AMA) in December 2012, showed the skills and competencies to which managers pay attention:

The following skills and competencies have been articulated within my organization as priorities for employee development, talent management, and succession planning in the next one to three years.

	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>
<i>Critical thinking</i>	2.2%	8.6%	17.3%	36.4%	35.5%
<i>Communication skills</i>	2.0%	6.5%	15.9%	35.7%	39.9%
<i>Collaboration/team building</i>	2.1%	6.8%	18.5%	38.8%	33.8%
<i>Creativity and innovation</i>	2.9%	10.5%	22.8%	36.1%	27.7%

Source: Critical Skills Survey, 2012.

Of particular importance are managers’ beliefs about those skills, which are taken into account in the recruitment process. Apart from communication skills (75.4% of positive indications), critical thinking is the most important competence sought during employment (69.1% of indications).

My organization makes an effort to assess these skills and competencies when hiring new employees.

	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>
<i>Critical thinking</i>	1.9%	9.0%	20.0%	38.0%	31.1%
<i>Communication skills</i>	1.4%	5.8%	17.4%	43.0%	32.4%
<i>Collaboration/team building</i>	2.7%	10.0%	27.1%	39.4%	20.8%
<i>Creativity and innovation</i>	3.6%	10.7%	32.4%	34.5%	18.8%

Source: Critical Skills Survey, 2012.

A very similar situation occurs in the context of the perception of key skills that , according to managers, influence the development of the organization. The only difference is that CT was considered more important than communication skills.

As the economy improves, please rate the following skills and competencies by their level of importance in helping to grow your organization.

	<i>Least important</i>	<i>Less important</i>	<i>Neutral</i>	<i>Somewhat important</i>	<i>Most important</i>
<i>Critical thinking</i>	0.1%	0.3%	2.4%	27.2%	70.0%
<i>Communication skills</i>	0.0%	0.3%	4.2%	31.8%	63.7%
<i>Collaboration/team building</i>	0.0%	0.7%	6.3%	41.5%	51.5%
<i>Creativity and innovation</i>	0.4%	1.4%	6.6%	28.0%	63.6%

Source: Critical Skills Survey, 2012.

In the context of a growing economy, according to the respondents, the ability of critical thinking is particularly important, as it contributes to the growth of an organization (even more than communication skills and creativity combined with innovation). Based on the results of the 2012 CSS survey, it is clear that management believes critical thinking plays an enormous role in the company's prosperity and will play an even greater part in the future.

CRITICAL THINKING IN AN EDUCATIONAL CONTEXT

Socratic problematization, as a reflection of CT, takes place through dialogical questioning, creating tension between ignorance or limited knowledge, and memory or previous experiences. Critical thinking has become an integral part of business education and one of paramount importance (Datar, Garvin and Cullen, 2010).

According to Reed and Kromrely (2001), the importance of critical thinking as an educational objective was recognized not only by educators, but especially by business leaders and politicians. This attitude toward CT is reflected in California's mainstream state higher education system, where critical thinking has been incorporated into the curricula of 19 state universities.

To capture critical thinking's relevance to both business and education, it might be enough to quote Albert Einstein, who has written in one of his letters that education is not about learning facts, but about "training of the mind to think something that cannot be learned from textbooks" (Phillip Frank, 2002; *Einstein: His Life and Times*, Cambridge, Da Capo Press). The underpinning of sustainable social and economic growth is strongly anchored in education across all ages and all disciplines (c.f. Ravallion & Chen, 1997; Miller, 2008; Barros, 1991; Kruss et al., 2005; Baranowski, 2010). Contemporary market demands call for incubation of reflexivity, self-awareness and intrapersonal growth for the benefit of society, through strengthening of critical thinking capacity (c.f. Neck, 2016). A high critical thinking capacity among teachers and education professionals encourages reflective practice and creates a more reflective educational process with excellent educational outcomes. This is of paramount impor-

tance if one is to compete in globalized market economies. Reflective education is understood as education focused on critical, divergent, multi-faceted thinking – the ability to search for information, to select and to evaluate sources of information, and to create cognitive autonomy and self-drive for continuous self-improvement (common ground with Life Long Learning principles). Through reflective education, people aim to activate personal potential for critical assessment of oneself and others, their situation in the world and their socio-educational environment, and to acknowledge the ontological relativism and the infinity of points of reference and points of view. A reflective attitude aims to promote social inclusion, tolerance, emotional intelligence, flexibility and the development of individual empathy toward all people. It is not intended to undermine shared social values and norms, but it allows for deeper understanding and for well-informed choices. The flexibility encouraged by reflective education helps to overcome difficulties and adverse conditions. It allows self-refinement and self-strengthening in the face of adversity (Odrowaz-Coates & Perkowska-Klejman, 2016, p. 182), building stronger social capital with positive attitudes toward problem-solving.

The preparation of teachers, head teachers and pedagogues plays a key role in improving an education system that must adapt to the challenges of the modern world and the modern economy (c.f. Baranowski, 2017b). The Future Work Skills 2020 report highlights the necessity of refining soft skills (the ability to notice deeper and hidden meanings; social and emotional intelligence; innovative thinking, and the ability to adapt), which have increased in importance to employers and the labor market in general. An increasing life expectancy, the frequent use of machines to do routine tasks, the environment of new media and the increased importance of global corporations have all influenced a continuing change of competency profiles for many professions. Such changes will benefit people capable of critical and reflective judgment, who are prepared to build well-analyzed strategies based on up-to-date information from multiple disciplines of science and praxis. Moreover, critical thinking skills are of paramount importance in promoting the principles of sustainable development, consumption and production, where people are aware of the consequences of their actions, can foresee alternative scenarios, make more responsible choices as consumers and are more capable of self-criticism, to the benefit of the environment.

The changeable labor market demands greater flexibility and the improvement of soft skills (c.f. European Reference Framework 2006, Youth at Labor market report 2011). This demand corresponds with the EU priorities, set out in the Strategic Framework for Education and Training 2009–2020, to implement the concept of lifelong learning, mobility and the improvement of both the quality and efficiency of both teaching and training. It promotes equality, social cohesion and active citizenship, stimulating creativity, innovation and entrepreneurship at all levels of education and training.

Reflexivity is particularly important in education because it enables the flow between knowledge, abilities and practical actions, which is of utmost importance in “liquid” modernity (Bauman, 2000; Beck, Giddens & Lash, 1994) and an unpredictable, globalized labor market. The development of critical thinking skills should be also viewed as a moral obligation (Eccles, 2017) in considering the implications of the clas-

sic experiments by Stanley Milgram (1961–74), with the use of electric shocks by students on other students, under the instruction of a false authority figure, not to mention the tragedies of World War II. This should be sufficient justification of the need for the enhancement of critical thinking skills in society (c.f. Milgram, 1963, 1965).

A frequent argument in discussing the negative aspects of education systems, even at elementary level, is their scholastic character (Baranowski, 2017a). This was clearly articulated in the Jeevan Vasagar article, which stated that “schools in Europe are frequently criticized by business leaders as “exam factories” that churn out students unable to cope with life beyond the classroom. But the lesson to be drawn from international comparison is that Europe’s schools are far better at teaching creative thought than this criticism implies” (Vasagar, 2014). Step by step, a stronger foundation in critical and reflective praxis of teachers and head teachers will positively affect their workplaces and stimulate a bottom-up enhancement of the education system for the benefit of societal and economic growth, producing an excellent workforce for thriving business. CT skills enhanced at the university level may be an answer to the challenges of technological unemployment and the continuing changes to the nature of work in highly developed economies. This is confirmed by the *Economist* (2014) article that deals with adaptation to progress resting on political and policy responses, which are based on the institution of universal education and university attendance.”

CT IN EDUCATIONAL PRACTICE

The impact of CT skills on the educational system, and the enhancement of these skills for business, should be a matter of major consideration in addressing the economic and social problems of these times. Imagine the positive impact a common CT skills-based education system would have on the problems in society. An example would be access to information and technology in today’s developed societies, which is recognized through the prism of patents. Patent rights appear to be capable of being retroactive to economic development at every level of advancement, contrary to the generally accepted “rationalisation” of this issue. If people reject the interests of large corporations and therefore the media coverage of the centers of interests controlled by these corporations, it may turn out that what is “legitimate” today, based on the ability to think critically and combine facts, may turn out to be unjustified and retroactive – unjustified and retrospective from the perspective of starting criteria, such as economic efficiency and rational decision-making, and elements connected with free-market logic. Intellectual property rights in the form of patents in a critical sense can be paraphrased as monopolies whose justification in capitalist economies would be difficult to implement. Such undertakings, however, need appropriate competences, which are aimed at undermining what we have found and not at the thoughtless acceptance of the world as we have found it. In this case, critical thinking makes important differences.

By adopting the general arguments in support of CT skills, one can move on to a more detailed level of reflection and try to consolidate the existing research on this

subject. For example, Wilbert McKeachie (1970, p. 2) wrote that “in general, large classes are simply not as effective as small classes for critical thinking.” On the other hand, Elizabeth Foote (1996) analyzed how 15 professors of English in a small community college changed their classroom practices after being trained in the enhancement of students’ reflexivity and how it positively affected the students’ critical thinking ability and their engagement in the classroom and the community. In the United States, there is also a visible shift toward teaching critical thinking, and the most commonly used model is Paul’s model (Reed & Kromrey, 2001), which promotes students’ abilities to think historically and critically without lessening their end-of-term content knowledge.

Some researchers contend (c.f. McMillan, 1987, p. 4) that the United States of America in the mid-1980s shifted toward critical thinking in both business and education when the journal *Education Leadership* and several issues of the *National Forum* (Paul, 1984; Glaser, 1985) focused on the importance of CT. It is worth noting that other countries had already noticed the impact of critical thinking in development of Key National Intelligences and have ensured that critical and reflective thinking has become an integral part of studies across different disciplines: engineering, medical science, mathematics and the science of computing; a majority represent the United States, the United Kingdom, Australia and Canada.¹ It come as no surprise that there is an MBA

¹ There is even a critical thinking course for school pupils – key stage 3 – at Brunel University [<http://www.brunel.ac.uk/cbass/education/research/bace/services/research-and-development/critical-thinking>, <http://www.brunel.ac.uk/cbass/education/research/bace/urban/information-for-practitioners>].

– A creative and critical studies center was established in the United States to support research and university courses in this area: [<http://fccs.ok.ubc.ca/welcome.html>]

University of Tampere in Finland writes about its critical Master’s Program: – “The studies aim at educating teachers who are able to think analytically and critically, solve problems, and work as teacher-researchers.”

[<https://www.masterstudies.com/Masters-Degree-Programme-in-Teacher-Education-M.Ed./Finland/UTA/>].

– A business course in Reflexive Methodology took place at Hanken School of Economics, in Helsinki:

<http://www.kataja.eu/courses/course-descriptions/courses-2015/39-courses/courses-2016/method-courses/126-reflexive-methodology-24-25-09-and-22-23-10-2015>

– A course on reflexivity was developed at the University of Windsor, Canada: “Reflexivity: A Concept and its Meanings for Practitioners Working with Children and Families”

[<http://www1.uwindsor.ca/criticalsocialwork/reflexivity-a-concept-and-its-meanings-for-practitioners-working-with-children-and-families>].

– A Reflexivity and Intervention study was organized at the University of St. Gallen in the Department of Organizational Psychology:

[<http://www.opsy.unisg.ch/en/research/reflexivity+and+intervention>]

– Monash University in Australia leads on critical thinking courses across study levels and faculties:

[<https://www.monash.edu.au/pubs/handbooks/units/ATS2946.html>

<https://monash.edu.au/pubs/handbooks/units/MBA5730.html>

<https://monash.edu.au/pubs/handbooks/units/MBA5530.html>]

– A critical thinking course is obligatory at Science at Technology University in Norway

[<https://www.ntnu.edu/studies/courses/IMT6271#tab=omEmnet>].

Critical Thinking in Counseling course is run in Canada:

[<http://www.canyons.edu/Offices/Counseling/Pages/Critical-Thinking.aspx>]

– A course on critical thinking in medicine in Canada:

[<https://medicine.dal.ca/departments/core-units/DME/critical-thinking.html>]

in critical thinking at the Japanese University of Business.² Moreover, the diversity of globalized societies, labor market uncertainties and rapid advancements in technology, require a high degree of critical thinking ability to prevent social exclusion and dependence on state welfare. Critical and reflective thinking, therefore, must become a cornerstone of education in developed economies.

In Iceland, the role of universities in the promotion of critical and reflective thinking is more and more prevalent. Educational reflexivity is treated as a basic category for building competencies and is continuously developed (Jónsdóttir, Gísladóttir & Guojónsdóttir, 2015; Guojónsdóttir & Jónsdóttir, 2012). In Germany, multifaceted research on education and schools has a long tradition of considering social environments (Tillmann, 1987; Fend, 2009). The internal processes within the education system, reflected in individual practices and decisions, are based on reflective and critical assessments of reality (Fend, 2008; Reinmann-Rothmeier & Mandl, 1998), leading to frustration and poor outcomes in cases where reflective and CT skills are not activated. The U.S., U.K. and Australia – hubs of global economic capital and science centers – lead in the number of critical thinking courses at universities, on a leadership approach in education, and in research of reflexivity and critical pedagogy.

There is still room for improvement in other developing countries. For instance, Poland's current model of public education is organized around traditional definitions of teaching and conventional didactics. Higher education in Poland is dominated by a positivist approach with an encyclopaedic transfer of knowledge by rote. Furthermore, it is still unpopular at the university level in Poland to create the conditions for reflective and independent learning (Czerpaniak-Walczak, Kwiatkowska).

Michał Kwiatkowski³ of the Maria Grzegorzewska University in Warsaw has investigated a significant number of teachers and head teachers enrolled in post-diploma studies on *Management in the Education System*. This program enabled Kwiatkowski to

– Massachusetts course for students of technology:
[<https://ocw.mit.edu/courses/urban-studies-and-planning/11-965-reflective-practice-an-approach-for-expanding-your-learning-frontiers-january-iap-2007/>

[<https://ocw.mit.edu/courses/urban-studies-and-planning/11-965-reflective-practice-an-approach-for-expanding-your-learning-frontiers-january-iap-2007/lecture-notes/>]

– Romanian critical thinking course at Maastricht School of Management

[<https://iversity.org/en/courses/critical-thinking-in-today-s-communication>]

– The Center for Teaching Excellence developed a course on how to incorporate critical thinking into your teaching course

[<https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/planning-courses-and-assignments/course-design/critical-reflection>]

– Critical thinking for students at Bio-Ethics in Life Sciences

[<https://www.training.cam.ac.uk/course/gsls-criticalthinking>]

– University of Queensland, Australia: postgraduate medical course Critical Thinking and Research Principles
[http://www.uq.edu.au/study/course.html?course_code=IMED7009&offer=4845525354324558]

These are just a few examples of growing popularity of critical and reflective thinking courses around the globe.

² <http://www.globis.ac.jp/curriculum/ecrt.html>

³ M. Kwiatkowski, Unpublished post-diploma study outcomes report 2017, Warsaw 2017.

assess their training needs (in two groups: in the academic year 2015–16 and 2016–17). The most frequent needs identified among postgraduate students were related to the field of educational evaluation (embedded in the practice of Prof. Niemierka). Moreover, a significant proportion of head teachers indicated further interest in courses and post-diploma studies aimed at improving problem-solving skills and their ability to reflect more deeply on themselves, other people they come in contact with, and their professional activities.

CONCLUSIONS

When considering the issue of CT skills through the prism of economic and business requirements, one should not forget a critical view of the process of commodification of education in general. As Henry A. Giroux (2009, p. 16) remarked, “in the age of money and profit, academic subjects gain stature almost exclusively through their exchange value on the market.” The question that seems natural from the point of view of critical pedagogy is whether CT skills and reflective judgment are “critical” and “reflective” if they ignore the context of the neoliberal economy with its numerous disadvantages (Bonal, 2003; Davies & Bansel, 2007). Furthermore, according to the latest report *Education at a Glance* (2017, p. 104), across OECD countries, adults 25 to 64 years old with tertiary degrees earn on average 56% more than those with only upper secondary education, while those education with below upper secondary earn on average 22% less. This means having a university degree, contrary to some analyses (Standing, 2011, p. 68), is still financially viable, which translates into a higher probability – as Max Weber would put it – of realizing life chances. The potential question is, what will be taught in secondary schools and universities in the near future? Will it be skills like CT and reflective judgment, and will there be correspondence in requirements between education and the labor market? On the other hand, are the main objectives of education to meet the requirements of changing labor markets, or are the priorities quite different? It is possible these goals are not contradictory if the system of education is re-defined in the direction of critical and reflective thinking? Correspondingly, the *Future of Jobs* report contains similar observations, although it uses different phraseology. It concludes that “respondents anticipate that a wide range of occupations will require a higher degree of cognitive abilities – such as creativity, logical reasoning and problem sensitivity, as part of their core skill set. More than half ... of all jobs expected to require these cognitive abilities as part of their core skill set in 2020 do not yet do so today, or only to a much smaller extent” (*The Future of Jobs*, 2016, p. 24).

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MYŚLENIE KRYTYCZNE – ZACIEŚNIANIE ZWIĄZKU MIĘDZY BIZNESEM I EDUKACJĄ

ABSTRAKT: W niniejszym opracowaniu znajdziemy dyskusję opartą na analizie źródeł wtórnych poświęconych reorientacji polityki w kierunku umiejętności krytycznego myślenia i czynników społeczno-edukacyjnych istotnych dla biznesu. Będziemy argumentować, że zdolność krytycznego myślenia (CT) jest ważna nie tylko dla rozwiązywania problemów, ale przede wszystkim dla ogólnego sukcesu korporacyjnego oraz dla dalszego rozwoju biznesu i gospodarki przyszłości. Artykuł składa się z definicji krytycznego myślenia, jej pozycji w polityce edukacyjnej i globalnej gospodarce rynkowej, a także jej znaczenia dla biznesu oraz osadzenia w edukacji.

SŁOWA KLUCZOWE: myślenie krytyczne, biznes, edukacja, rozwój, rynek pracy, gospodarka, polityka