Building Learning Power and Critical Thinking in the Field of Online Tutoring

Abstract

This article is first of all a theoretical study covering the whole area of critical thinking. The development of critical thinking should be supported by new information technologies. The text only points to some possibilities of using information technologies in the concept of building learning power and critical thinking.

The development of information technologies gives us new tools and forms to support the teaching/learning processes. Many of the new tools of digital technology pose new teaching challenges for the teacher. However, there appears a question that is not only worth asking, but also worth answering: how to improve the teaching/learning process with the help of the new educational opportunities, so as to strengthen it and not to disturb it at the same time? A tutor-teacher has to search and to find out – in the area of these educational opportunities that belong to him or her and his or her pupils – such optimal solutions that neatly combine both the elements of traditional teaching and the ones that are typical of distance learning. This gives new opportunities for effective online tutoring when the teacher is available online for any of the students at a specific time that is perfectly convenient for each of them.

Keywords: Guy Claxton, building learning power, online tutoring, critical thinking
Introduction

New IT technologies introduced to schools should develop in parallel with the accompanying methodological reflection on how to strengthen the interests of young people with the curricular topics of education, how to teach critical and independent thinking, argumentation, participation in dialogue, and social communication. In this article, I present the problem of developing the potential of critical thinking and learning with the possibility of increasingly widespread use of information technology tools.

Critical thinking should be understood as acquiring numerous competences and improving skills related to the broadly understood logical culture through proper handling of the spoken word, but above all the word operated in the multimedia space. In addition, critical thinking is also mastering the ability to use the principles of indirect justification of beliefs or assumptions, distinguishing the relationship between the field of language characters and the field of thoughts and denotations and acquiring knowledge of the principles of rhetoric, as well as skilful conduct and participation in a discussion or thematic dispute. If the critical thinking areas are supported by new IT tools, then certainly the educational reality will take on a different character than it is in traditional education that evidently promotes student passivity.

If one wants a good student, one has to do something to make the student want to learn. However, without taking into account new technologies, which the student often has better access to than what the school offers, it is difficult to overcome educational barriers and stereotypes about the irreplaceable role of the teacher in the education of young people. In this article, I am only trying to outline the possibilities of supporting the development of the potential of critical thinking and learning with IT tools. Being aware of the importance of continuous improvement of the student’s critical thinking skills (which is not merely about adopting the attitude of a skeptic, who doubts anything and everything, but about skillfully building one’s own knowledge system), I will only pay attention to some areas of skills that are important in this field of education (Siemens, 2005)¹:

- understanding the meaning of basic terms from individual knowledge ranges;
- skills in formulating basic humanistic and social problems with adjoined solution proposals;

¹ According to Siemens, the concept of connectivism – combining the ideas of constructivism, cognitivism, and behaviourism – is a proposal to create knowledge by the learner through attempts to understand their own experiences and create meanings. Behaviourism and cognitivism perceive knowledge as something external to the learner; thus, they recognise the process of learning as an act helpful in knowledge integration. In teaching, the connectivist approach allows for the inflow of new pieces of information so as to recognise them as either important or invalid, whereas those that were important yesterday can be put subject to contemporary criticism.
• the ability to formulate questions;
• indicating a special place for the humanistic and social search for the truth;
• formulating arguments and skilful searching and selection of examples supporting argumentation, but also the ability to indicate counter-arguments;
• understanding the meaning of logic in correct thinking and expressing thoughts;
• gaining and having knowledge on the most common sources of misunderstandings and proposing ways to overcome them;
• having knowledge about various types of defining and avoids errors in defining and avoiding categorical errors;
• mastering the rules of conducting discussions;
• distinguishing the thesis from the adopted assumptions;
• formulating the subject of one’s own speech and mastering the skills of proper preparation for speaking;
• formulating a plan of written work and oral expression (in accordance with the principles of rhetoric);
• referring to the positions and arguments convergent and inconsistent with the presentation of own decisions in the issues being addressed;
• gaining independence in the development of specific problems contained in education programmes.

Participation of the learners in the process of multimedia social communication is a good test of their ability to combine different contents of education with their own experience. Creative building of social relations depends on the acquired awareness of co-responsibility for participating in the life of the local environment, as well as the national and international community. An important question – one that should be asked constantly – concerns the adopted educational standards, reflecting the contemporary challenges posed before the generation of young people. The basic question still remains the same: how many both new and acquired skills will contribute to the success of life expected by the young generation? I do not want to discuss the current state of the currently existing educational standards. What I just want to do is to discuss a few elements supporting the development of the potential of critical thinking, and thus learning, which can be effectively supported by new information technologies in the increasingly proposed form of online tutoring. I would like to focus on the fundamental educational problem, which is the willingness to learn and the satisfaction that comes with it.

Using the didactic experience, it can be noticed that effective development of skills and acquiring new competences by the students is possible if they better acquaint themselves with the surrounding reality, which in turn depends on the level of knowledge acquired by them. In view of introducing the students into the multimedia space, the following questions are still important: What competences are needed to equip a young person in so as to prepare them for lifelong learning? How to prepare a student to independently acquire knowledge? What will young persons really need when they complete their school, technical, or
academic education? Answers to these questions have to be seen as determinants of developed education programmes which not only are adequate enough to the needs of people and society but also incorporate access to Internet resources.

The Theoretical Basis of Online Tutoring Rules

Currently, strongly formalised teaching and learning methods, combined with verification and certification, cause stress and shape the negative attitudes of young people. Obviously, the student is not satisfied with passive participation and listening to the content of education presented to him or her. Often not even understanding the importance of specific knowledge ranges at specific stages of education, students want to decide for themselves what, how, and when to learn. They want to be able to choose their individual educational path. They want their education content to be interesting so that they can participate in the ongoing everyday dialogue that refers to and concerns many common things. These are the natural needs of every human being that result from the acquired awareness of their freedom, which is why students openly demand their freedom to make choices about their development. The student expects from the teacher: unconventionality, that is, creativity expressed by the ability to choose the right teaching methods that match the individual style of their personalised work; combining theory and practice; hints on how to deal with the emerging difficulties in the understanding of the surrounding reality. Therefore, a good and even necessary supplement to group and class education is e-learning (blended learning – b-learning). We use new online tools, and teaching takes the form of online tutoring. Videoconferencing is becoming the norm, as well as teaching in virtual classes thanks to the availability of appropriately designed educational platforms. In the last ten years, e-learning has gone through many stages in its development, from a non-targeted and non-interactive tool, through non-simultaneous (asynchronous) text messaging and multimedia communication, to full (synchronous) teaching (Reis, 2010).

Before discussing the areas of students’ critical thinking and learning abilities, let me present a few points that, in my opinion, justify the need to introduce individual tutoring based on online tutoring. This type of education, however, cannot be obligatory for all students, but should be an option to be chosen independently. While speaking about the possibilities of developing the potential of (among others) critical thinking, I would like to point to such assumptions that are helpful in the development of tutoring didactics able to function within this

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2 In this regard three stages of e-learning development are distinguished: e-learning 1.0, e-learning 2.0, and e-learning 3.0.
body of education that is supported by distance learning (Smyrnova-Trybulska, 2009; Smyrnova-Trybulska, 2010). In the preliminary elaboration of this problem I will use the theory of multilateral education formed by Wincenty Okon, at the base of which we find the so-called the theory of knowledge components; see: Table 1 (Śleziński, 2000).³

Table 1.
Theory of the components of knowledge

<table>
<thead>
<tr>
<th>Expressions defining components of knowledge</th>
<th>Ways of learning</th>
<th>Courses of education</th>
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<tbody>
<tr>
<td>defining</td>
<td>assimilation</td>
<td>feeding</td>
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<tr>
<td>explaining</td>
<td>exploration</td>
<td>problem formatting</td>
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<td>assessing</td>
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<td>normative</td>
<td>action</td>
<td>practical</td>
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Source: Own work.

The theory of the components of knowledge can be derived from the knowledge defining ways of learning/teaching methods. The four components of knowledge that can be expressed in descriptive, explanatory, evaluating, and normative sentences can be assigned to four ways of learning: assimilation, exploration, experiencing, and action, as well as four learning courses: feeding, problem fromatting, exposing, and practical. In the development of the problem of developing the potential of critical thinking and learning, I also used the taxonomy of motivational, practical, and cognitive objectives developed by Boleslaw Niemierko (Niemierko, 1999) and the Building Learning Power concept developed by Guy Claxton, helpful in developing the principles of online tutoring (Claxton, 2001; Wollman, 2013a, pp. 12–104; Gornall, Chambers, & Claxton, 2013; Wollman, 2013b). The concept of developing the potential of critical thinking and acquiring knowledge refers to practical educational activities supporting the student’s emotional and cognitive activity and knowledge in the field of natural anthropology.

It is an undeniable fact that in classes conducted online, students work better in an atmosphere of freedom, when they do something of their own free will, when they themselves seek answers to questions asked and develop their own interests at the same time, which motivates them to be independent in their thinking. Therefore, the problem of the development of critical thinking and learning should be analysed in at least four aspects: emotional, cognitive, strategic, and social.

³ The theory of the components of knowledge has served me earlier to develop didactics of philosophy.
The first of these is not essential for developing critical thinking, just like the other three aspects, but it performs an important function of directing the emotions and self-determination of the will to the effort involved in knowledge acquisition activities.

**Four Aspects of the Problem of Developing the Potential of Critical Thinking and Learning in Online Tutorials**

The emotional aspect of learning mainly refers to such issues as: self-motivation, getting involved in gaining knowledge, skilfully experiencing revealed values hidden in the proposed content of education, and – last but not least – the ability to focus attention and control over disruptions in learning. Each association of experiences with the learning content learned by students affects their permanent memorising and contributes to the independent formation of their own socio-moral attitudes. One should also remember about the importance of an ability to master the emotions that can come out in discussions or to deal with failures that may result from learning about difficult topics. When recognising the emotional aspect of learning, what seems important is to skilfully develop one’s will by forcing oneself to overcome difficulties and by strengthening an attitude of perseverance.

The cognitive aspect includes the main cognitive skills of the student. It concerns the development of, among others, the passion of searching for the truth, development of the skills of asking questions, and improvement of the student’s cognitive skills. This third issue mainly entails such cognitive skills as: curiosity, criticism, remembering, the ability to combine different contents, perceiving differences and similarities between the positions expressed, the ability to collect information, and the ability to build one’s own knowledge system. In the cognitive range, the student is expected to master not only declarative knowledge – that is, knowledge about something – but also procedural knowledge – that is, knowledge of how to do something. It is worth remembering that the knowledge of the principles of rhetoric (such as conducting dialogues, thematic debate) and the ability to apply them in practice are important in this respect.

The strategic aspect includes the self-assessment of the acquired knowledge, as well as the skills and competences just mastered. This aspect concerns the students’ attention to planning and monitoring their own “knowledge” system, as well as flexible and critical introduction of changes to this “system.” This strategic aspect also helps students in gaining full independence of learning; this is where they are expected to master and, subsequently, to improve their ability to think critically, solve problems, and even discover them. They learn how to satisfy their curiosity
by improving the ability to formulate their own answers to questions, by solving their problems independently, but also by being able to build their own concepts or theories by searching for answers to questions such as “why?” or “what if?” In terms of the strategic aspect of critical learning, a student who has knowledge on how to construct spoken and written statements on the one hand, and on how to perform various activities such as being able to form definitions, reason, explain, prove, translate, justify, etc. on the other masters the ability to optimise problem-solving and connect theory with practice.

The social aspect of critical thinking and learning includes the argumentative skills of conducting discussions as well as maintaining openness and tolerance. In this aspect, the student acquires social competences, such as: ability to work in a team; empathy; cooperation; sharing ideas on social forums; and, finally, listening to and perceiving different sides of the issues discussed. In the course of social exchange of ideas, the students are expected to learn how to confront their own judgments and beliefs with the views and opinions of other people. This situation compels the students to be able to master the ability to use factual arguments, develop critical consideration of emerging doubts, and evaluate opinions.

**On the Four Areas for Developing the Potential of Critical Thinking and Learning**

The development of critical thinking and learning that takes into account the four aspects mentioned above should apply to both classroom and online tutorial. The four aspects of the development of critical thinking and learning let one distinguish four areas where the potential of critical thinking and student learning ought to be developed. These are: motivation, resourcefulness, social communication, and reflexivity (Table 2). Each of these areas is recognised to form a proper orientation of the students’ natural abilities of critical thinking and learning where they can develop their emotions, as well as their will, intellect, action, and cooperation.

The four areas correspond to the main dispositions and abilities of the student, which, in turn, lead to mastering these competences that are necessary to deal with critical learning and gaining the knowledge.
Motivation is the first highlighted area necessary for the development the student’s potential for critical thinking and learning. The student’s motivation area focuses upon their self-control in the area of skilful coping with learning, as well as self-acceptance that mainly results from recognising one’s own abilities and skills, and/or controlling internal and external disturbances, which should be skilfully recognised and overcome. In the area of motivation, it is also important to skilfully engage oneself in learning, as such an activity strengthens self-motivation and self-determination in acquiring knowledge. In turn, perceptiveness, recognising important issues, and perseverance in overcoming encountered difficulties result in the growth of one’s satisfaction with self-learning.

Resourcefulness remains the second area of the development of the potential for critical thinking and learning. Learning in this dimension reaches its cognitive aspect not only in the order of acquiring the messages but also in the one that results in their understanding after their acquisition. Resourcefulness is the ability to learn and become aware of the essence of all the issues that have just been mastered. Thus, this approach to resourcefulness results in striving to have knowledge as well as a wide repertoire of strategies that can be used in different situations of uncertainty.
Resourcefulness in the order of acquiring messages comes down to the development of the procedures that should result in the elicitation of the forms of the oncoming problems as well as their prompt naming that should be effective, accurate, precise, attentive, and focused on the meaning. When attempting to understand information, resourcefulness results in criticism, inquisitiveness, searching for and perceiving the connections between various positions, as well as recognising new meanings and skilfully integrating them into the structure of known relationships and meanings. This ability contributes to the development of systemic thinking in building of one’s own “system” of knowledge. In this way, students can be able to discover relationships between specific learning content and their own views, which should let them perceive reality from a different perspective.

An important instrument that helps one develop the learning potential is imagination, which allows one to look at the analysed issues in the out-of-the-box way. Most often, such imagination can be used to illustrate and/or visualise specific content by creating memory maps, diagrams, posters, or multimedia presentations.

The strategic aspect of developing the potential of critical thinking and learning rests in the notion of reflexivity, through which the students reach self-esteem of acquired knowledge, combine theory with action, and gain awareness of how learning proceeds and how it should be guided.

While remaining in the area of reflexivity, one should pay attention to the reflection on the accumulated knowledge that is always accompanying us. Such an approach seems necessary so as to make constant selection of the acquired knowledge due to the criteria important for us, as well as to look for new areas and contexts in which such knowledge can be used. The skills of transferring the acquired knowledge to other areas of science remain important. In turn, reflexivity in the order of meta-learning includes the self-assessment of the acquired skills and acquired competences, the ability to plan learning, to correct these plans and – last but not least – to evaluate possible ways of learning. In effective learning, it is important to know how to make use of the ability to learn from one’s own learning experience. Students who can learn from their own mistakes, know how to change tactics and search for new ways of acquiring knowledge, recognise their own weaknesses and strengths of effective learning, and thereby express the understanding of the importance of self-criticism due to acquired competences and improved skills.

We are increasingly less likely to be independent at the workplace, which is why engaging in professional work requires us to skilfully cooperate with others. The employee is required to be able to listen and understand someone with whom he or she work, especially when he or she disagrees with someone right away. The students must therefore acquire numerous competences and improve social skills while preparing for the challenges awaiting them.
The ability to cooperate is necessary in any field where sharing knowledge and ideas appears to be a must. The ability to communicate and the willingness to share ideas create the conditions for both making effective decisions and coming out with effective actions. When working in groups, we must have the skill of empathy and tolerance, while not being ready to give up the ability of critical analysis of any of the discussed problems. The ability to listen attentively as well as to understand the arguments and/or accepted positions or opinions cannot deprive students of their right to present critical opinions. The desire to come to an agreement and to solve problems together is connected with the adoption of an attitude of openness, which is expressed by tolerance. It would be a mistake to think that being tolerant is concomitant with uncritical acceptance of other people’s views or proposals for solving problems. When one is taking part in a dialogue, it is important to accept the others as equal partners and to see in them the dignity of the human person (Śleziński, 2014, pp. 151–161). At the same time, however, one should be critical of the propositions made by other people.

In blended learning, the potential of critical thinking and learning that has been developed should be presented and discussed with students. All practical tips that the teacher passes to the learners, including such tips as how to learn and/or how to effectively memorise learning content, are valuable when developing this potential. The teacher should encourage students to participate in various forms of loud learning, to share their knowledge; students ought to be encouraged to suggest interesting topics and/or to create their own tests, or even to prepare a “wall of questions,” i.e. an activity in which students can propose their own questions that are to be answered accordingly. All such activities are supposed to help maintain the students’ involvement in learning the curricular content of education, but also let both the teacher and the students enable a better understanding of the so-called weaknesses and strengths of their personalities and/or talents.

New information technologies introduced to schools enable learning at a distance, and teaching becomes a form of online tutoring. With this in mind, it is necessary to undertake large-scale research on this issue in order to properly define the principles of modern didactics. These are not only the expectations resulting from the current teaching system, but also the expectations of the interested parties themselves – students who use modern information technologies very well.
References


Budowanie kompetencji do uczenia się oraz krytycznego myślenia
poprzez zdalny tutoring

Streszczenie

Niniejszy artykuł jest przede wszystkim studium teoretycznym dotyczącym krytycznego myślenia. Rozwijanie tej kompetencji powinno się wspierać wykorzystując nowe technologie informacyjne. Tekst wskazuje na pewne możliwości wykorzystania technologii informacyjnych dla budowania kompetencji uczenia się i krytycznego myślenia. Rozwój nowych technologii dostarcza nam nowych narzędzi i form wsparcia procesu nauczania/uczenia się. Wiele z nowych narzędzi technologii cyfrowej stanowi nowe wyzwanie dla nauczyciela. Jednakże wyłania się pytanie, które nie tylko warto zadać, lecz na które także warto poszukiwać odpowiedzi: jak usprawnić proces nauczania/uczenia się wykorzystując nowe możliwości, jakie dają technologie, aby proces ten wzmocnić, a nie zakłócić jego przebiegu? Tutor czy nauczyciel powinien poszukiwać w tym obszarze możliwości edukacyjnych dla siebie i uczniów takich optymalnych rozwiązań, które sprawnie łączą zarówno elementy tradycyjnego nauczania, jak i nauczania na odległość. Takie rozwiązania dają efektywny tutoring, w przypadku którego nauczyciel jest dostępny dzięki sieci Internet dla każdego ze swoich studentów w określonym czasie, który jest dogodny zarówno dla nauczyciela, jak i dla ucznia.

Słowa kluczowe: Guy Claxton, budowanie kompetencji uczenia się, tutoring online, krytyczne myślenie

Развитие способности к обучению и критического мышления
в области онлайн-тьюторства

Аннотация

Данная статья – прежде всего теоретическое исследование, охватывающее всю область критического мышления. Развитие критического мышления должно поддерживаться новыми информационными технологиями. Текст лишь указывает на некоторые возможности использования информационных технологий в концепции формирования силы и критического мышления. Развитие информационных технологий дает нам новые инструменты и формы для поддержки процессов преподавания / обучения. Многие из новых инструментов цифровых технологий ставят перед преподавателем новые задачи по обучению. Однако возникает вопрос, который не только стоит задавать, но на который стоит ответить: как улучшить процесс преподавания / обучения с помощью новых образовательных возможностей, чтобы укрепить его и не препятствовать одновременно? Тьютор-учитель должен искать и находить в области этих
Desarrollar el poder de aprendizaje y el pensamiento crítico en el campo de la tutoría en línea

Resumen

Este artículo es, ante todo, un estudio teórico que cubre toda el área del pensamiento crítico. El desarrollo de este pensamiento crítico debe estar respaldado por nuevas tecnologías de la información. El texto solo señala algunas posibilidades de utilizar las tecnologías de la información en el concepto de desarrollar el poder de aprendizaje y el pensamiento crítico.

El desarrollo de las tecnologías de la información nos brinda nuevas herramientas y formas para apoyar los procesos de enseñanza / aprendizaje. Muchas de las nuevas herramientas de la tecnología digital plantean nuevos desafíos de enseñanza para el maestro. Sin embargo, aparece una pregunta que no solo vale la pena hacer, sino que también vale la pena responder: ¿cómo mejorar el proceso de enseñanza / aprendizaje con la ayuda de las nuevas oportunidades educativas, para fortalecerlo y no molestarlo al mismo tiempo? Un tutor-profesor tiene que buscar y descubrir en el área de estas oportunidades educativas que le pertenecen a ella y a sus alumnos soluciones tan óptimas que combinen perfectamente los elementos de la enseñanza tradicional y los que son característicos del aprendizaje a distancia. Esto brinda nuevas oportunidades para una tutoría efectiva en línea cuando el maestro está disponible en línea para cualquiera de los estudiantes en un momento específico que sea perfectamente conveniente para cada uno de ellos.

Palabras clave: Guy Claxton, Building Learning Power, tutoría en línea, pensamiento crítico