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ProInflow. 2016, vol. 8, iss. 2, pp. 4-18

ISSN 1804-2406

Stable URL (handle): https://hdl.handle.net/11222.digilib/135931
Access Date: 01. 12. 2024
Version: 20220831

LIS students as Critical Thinkers – Experiences of a complex pilot programme

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Abstract

The author emphasizes that critical thinking is a key competence not only during one's elementary, secondary and academic studies, but also in one's professional activities and personal life. The paper gives a general overview of a Hungarian pilot programme designed in 2011 aiming to promote students' basic and advanced critical thinking skills, and briefly introduces the findings of the pilot test with the participation of LIS students in Pécs.

Keywords: *critical thinking, thinking skills, development of critical thinking, LIS students*

Introduction – Why to teach critical thinking and what is it exactly?

Critical thinking is one of the major topics in contemporary education worldwide. Undoubtedly, there is no information literacy without critical thinking, since interpretation, analysis, evaluation and selection are unimaginable without those cognitive and meta-cognitive activities that critical thinking involves. However several authors and teachers share this opinion and they do intend to work on the development of students' critical thinking, they may face deficiency in their developmental work since they presuppose students who already possess sophisticated critical thinking skills the tasks are designed to enhance. If we take a quick look at the most well-known definitions of information literacy we find that they mention critical thinking as a key element in information handling.[1] However, it is symptomatic that the complexity (broadness and deepness) and the various levels of the developmental opportunities of critical thinking are not taken into consideration.

Critical thinking involves a set of cognitive and meta-cognitive skills to process and generate information and beliefs, based on a certain habit of intellectual commitment, a particular way in which information is sought and treated, taking into consideration alternatives and results.[2] From this viewpoint I agree with Bruce Reichenbach's approach which re-evaluates critical thinking in the light of experience, placing emphasys on its complexity. According to Reichenbach, critical thinking involves three components: a set of intellectual dispositions and six interconnected skills divided in basic and advanced levels of critical thinking.

The **intellectual dispositions of critical thinkers** are the followings:

- curiosity about the world, being creative questioner, trying to be well-informed and open-minded, considering points of view other than one's own, being sensitive to the feelings, levels of knowledge, and degree of sophistication of others,
- taking into consideration the limits of knowing and the role of personal judgments or biases in the knowing process, looking for probabilities rather than proofs,
- seeking reasons to defend a position, looking for alternative explanations, positions, arguments,
- taking or changing a position when the evidence, grounds, or reasons are sufficient, withholding judgment when the evidence, grounds, or reasons are insufficient,
- taking into account the total situation or context when interpreting something, deal in with the parts of a complex whole, anticipate the next step in the process,
- using relevant sources with precise citations, seeking as much precision as the subject permits, keeping thinking relevant to the main point,
- applying critical thinking abilities to a wide variety of subjects.[3]

Regarding those *interconnected skills* needed for critical thinking, Reichenbach emphasizes that „students cannot construct and analyze, let alone evaluate, arguments if they first have difficulty identifying the topic, thesis, and main points of what they read or hear [...]. A number of students have not yet mastered the basic critical thinking skills, but they function

[1]One of the most well-known definitions of critical thinking derives from the Final report of ALA (1989) declaring that „information literate is the person who has critical thinking for selection, evaluation and interpretation of the information found". More poetic but not less general definiton results from the framework of Paul and Elder, researchers of the American Foundation for Critical Thinking, defining critical thinking as „Excellence in thought which must be cultivated systematically […] the art of analyzing and evaluating thinking with a view to improving it." (Paul & Elder, 2014)

[2]Mărcuț, Ioana (2005). Critical thinking – applied to the methodology of teaching mathematics. *Educația Matematică*, (1) 1, 57.

[3]Norris, S.P. & Ennis, R.H. (1989). Evaluating Critical Thinking. Pacific Grove, CA, Midwest Publications. 12. Cited and adapted by Reichenbach, 2001. pp. 14-15.

at the beginning stages and do not know *how* to access the higher levels that their instructor is demonstrating."[4] We might start from the beginnings, laying the groundwork for being good critical thinkers. Reichenbach's view of the beginning and how critical thinking proceeds from that point has been influenced by Bloom's taxonomy[5], a widely accepted framework mapping the cognitive steps of learning processes and information handling. Reichenbach translated Bloom's educational objectives into a six-step model for developing critical thinking abilities which can be divided into two sets of three interconnected skills, starting from practicing basic critical thinking skills, and continuing with mastering advanced skills as follows:

Basic critical thinking skills are:

1. Acquiring knowledge or information: in terms of critical thinking, this basic step involves the ability to identify

- the topic the article or other information resource is about
- the issue that the author raises (which should be in the form of a question),
- the thesis (the main or primary assertion, the answer to the main question) that the author poses
- and the main points of what is said or written (what claims support, defend or develop the assertion, the reasons for which the thesis and its supporting evidence is or is not credible or believable).

2. Comprehending or understanding what you read or hear: this means making the ideas and information your own, to put other meanings into your own words, and to be able to explain the essence of a material to someone else, using a language which is not unfamiliar or cryptic. As a stage of critical thinking, comprehension can be associated with the tasks of discussion, expression, explanation, rearrangement, summary, or conclusion of what you have read, heard or seen.

3. *Applying what you understand to given situations*: through application related tasks one have the opportunity to demonstrate her/his comprehension which involves the application of the learned content to an actual situation, requires the student to illustrate or give an example of what was said, to prepare something showing whether she or he understood the rules, to predict what will happen in a reserach trial, or to demonstrate that a certain thesis is true.

Reichenbach emphasizes that these first three ability levels prepare critical thinkers for the three higher stages, so they are prerequisites to being able to achieve the advanced level skills.

Advanced level critical thinking skills are:

4. *Analyzing the information that you understand*: analysis means to be able to deal both with form and content. A critical thinker is able to look for organizational patterns or principles in the given material, she or he can observe the relationships and logical orders between the ideas explained in an argumentation (e.g. distinguishes dominant from subordinate ideas, or a statement of evidence from hypothesis and conclusions), is able to compare information received, and break down the material into its components.

[4]Reichenbach, B. R. (2001). Introduction to Critical Thinking. Boston: McGraw-Hill. Preface, pp. IX-X.
[5]Bloom, B. S. (1956). Taxonomy of Educational Objectives: Cognitive Domain. New York, McKay.

5. *Synthesizing and creatively using what you understand and have analyzed*: synthesis tasks go beyond application, and challenge the students to integrate materials from various sources, to prepare something original, to create or defend a certain view. This stage of critical thinking involves the composition of a writing, the invention, imagination, revision or transformation of something (a plan, a story, a design etc.) At this point the student is asked to show how she or he might solve a problem in a different way than others did.

6. *Critically evaluating what you understand and have analyzed or created*: This final stage of critical thinking means that critical thinkers look at connections between the evidence and the conclusion of a certain reasoning, and prefer to delay judgment until they have time to evaluate the reasons and evidence offered to support the author's view. A critical thinker tends to avoid affective behavior when evaluating, meanwhile takes into consideration the emotive aspects of people's lives that must be coupled with careful, rational evaluation of the evidence or reasons.[6]

Concluding, it is recommended to train students's critical thinking through the systematic practice of basic and advanced skills built on each other. The aforementioned stages allow students to assess the deepness and complexity of information handling better than they were previously able. Resulting from this detailed six-step model students will know *how* to access the higher levels of thinking, and they will understand what analyzation and evaluation mean when dealing with information and information resources.

In addition, Paul and Elder (2014) recommended that teachers plan instructional structures and activities to facilitate students to think through questioning tasks. If we take for example a certain author's reasoning, we should focus on and study the following structural elements of thought.(Table 1) This kind of approach improves the multilateral quality of thinking, resulting a much more meaningful and effective learning and reading practice that students have never experienced before.

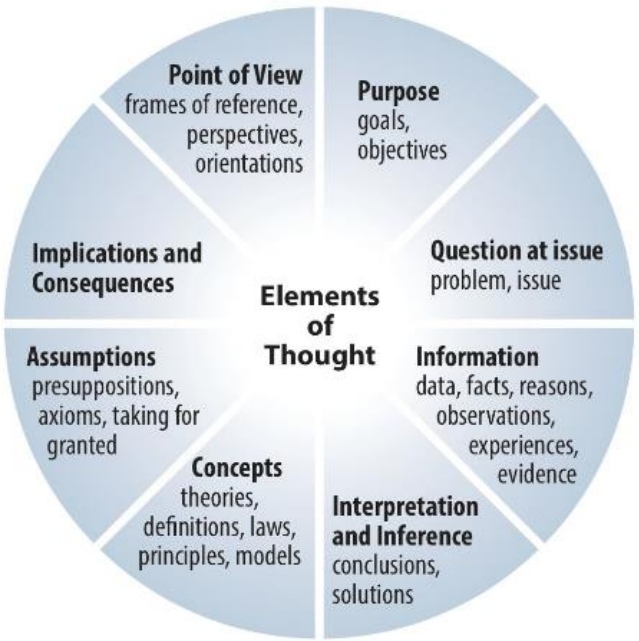

Table 1. The Elements of Thought in the model of Paul & Elder, 2014.

[6]Reichenbach, op. cit. pp. 20-26.

Hungarian pilots in teaching critical thinking

Specifically for teaching critical thinking, there are thousands of authors who contributed to the field, though it would be impossible to give a general overview of the pilots and researches available worldwide. I prefer to focus on some of the concrete national initiatives, such as disciplinary and cross-disciplinary pilots implemented in Hungary.

First of all, it's worth mentioning the best practices derived from the RWCT (Reading and Writing for Critical Thinking) project started by the International Reading Association and the North Iowa University, aiming to establish the implementation of a new instructional methodology in teacher training programmes. The main goal of this methodology is to teach more than 60 new techniques cultivating active, independent, reflective learning and critical thinking. These techniques encourage independent, reflective thinking, motivate attentive listening and liable personal learning, and show how to reveal the logic of arguments and how to debate confidently, solving problems thorugh the whole lifespan.

Since the RWCT project was sponsored by the Open Society Institute, not surprisingly, the core idea of the whole project is strongly related to the notion of citizenship education through the achievement of critical thinking. The programme is based on the idea that democratic practices in schools play an important role in the transition toward more open societies.[7]

The education of critical, responsible citizens seems to be crucial, especially nowadays, in the times of the crisis of traditional human rights institutions and tools. It means to develop citizens who are able to participate meaningfully. Meaningful participation and reflectivity are key elements in developing critical societies, where critical thinking is viewed as essential to living a reasonable and fairminded life and contributes to people's ability to recognize knowledge and alter beliefs. Paul and Elder (2014) envisions critical societies where children and youth are routinely taught that the rights and needs of others are equal to their own. According to this multi-cultural world view people learn to respect each other, meanwhile they are encouraged to think independently and discouraged from uncritically accepting the thinking or behavior of others. It is not about creating utopias anymore. Contemporary instructional methodologies like, for instance, the RWCT project or, moreover, the Living Library project introduced in this paper, describe very similar learning objectives students are expected to learn.

In the 1990's the RWCT methodology was imported to 20 Eastern and Central European countries. Since 1998 Hungarian pedagogy has successfully adapted the RWCT methodology integrating it under the umbrella of the constructivist revolution in teacher training. The RWCT methodology unambiguously enriched the continental pedagogy with its competency- and student-centred, collaborative pedagogical strategies aiming to enhance directly critical thinking through interactive and reflective learning, reading and writing activities. This project pedagogical principles are based on Bloom's Taxonomy, tailoring the tasks to the specific needs of students of all grades. Since 1998 the two volumes of methodological handbook and the collections of tasks published by Ildikó Bárdossy's research group at the University of Pécs represent the mainstream of the Hungarian best practices in this field. The exercises they offer in their collection are quite flexible and applicable in all grades and subjects.

Based on the cognitive principles of Bloom's taxonomy, critical thinking can be available for every students from the elementary to the university level. If teachers change the context and

[7]Tóth, L. (2007). Kritikai olvasás, kritikai gondolkodás. A fejlesztés alapjai [Critical reading, critical thinking. The bases of the development]. Debrecen, Pedellus. pp. 107-109.

the problems posed in their materials, both the tasks from the basic level and the higher order thinking level are relevant to develop directly critical thinking.[8]

At this point we might mention the contribution of the Hungarian National Educational Library and Museum. This institution has a „Reading Portal" (Olvasás Portál) supporting reading development and reading promotion, aiming to foster cooperation between Hungarian schools and libraries for the development of children's and youth' literacy. The portal offers a collection titled „Education Knowledge Depot" (Nevelési Tudásdepó) where 30 complex pilot programmes are available and downloadable for free.[9]

The Education Knowledge Depot project supports the development of non-formal and informal training programs, adapting international best practices. The common objective of these programmes is to mobilize interactive and reflective learning, enhancing students' reading and writing performance, information literacy, and digital skills. The programmes promote self-directed learning in different settings, supporting both curricular and cross-curricular, as well as non-formal and informal learning. This methodology helps to prevent learning deficiencies, seeking to build effective, autonomous thinking, enhancing information literacy and personal prosperity through skills essential for everyday life and work e.g. responsible decision-making with the help of versatile problem-solving, well-trained debate, questioning and critiquing culture, and strong interpersonal skills (respect, confidency, patience, empathy, tolerance).

A pilot programme for teaching critical thinking

This chapter focuses on a pilot programme designed in 2011 aiming to develop critical thinking within a cross-curricular framework.[10] The tasks of this pilot are based on the so-called three-stage learning cycle (Evocation, Realization of meaning, Reflection Creating meaning and Reflection), and parallely it was adapted to a modular template, a common structure for every Education Knowledge Depot pilot. Thanks to this modular structure teachers who intend to apply the methodology of the pilot have the opportunity to use just small part units without testing the whole programme which would take a long time and doesn't match the school schedule. The length of the whole programme is 5-20 hours depending on the module choice. As for evaluation, students should gain an understanding of their strengths and areas for improvement through self-assessment and parallel, they should learn to give and get feedback when working in team or pair. The process of learning should be personal, interactive and reflective, supported by a non-directive, person-centered facilitator.[11]

The introductory module of the pilot recommends that teachers should choose topics matching their students' personal interest and emotional needs, focusing on problems relevant in the contemporary context of the given society. For instance, my pilot introduced

[8] Bárdossy, I. [et al.] (2002, 2007). A kritikai gondolkodás fejlesztése – az interaktív és reflektív tanulás lehetőségei I-II [Development of critical thinking – opportunities of interactive and reflective learning] Pécs-Budapest, University of Pécs.

[9]The collection is available here:
http://olvasas.opkm.hu/portal/menu/nevelesi_tudasdepo_mintaprogramok__bongeszo

[10]Béres, J. (2012). A kritikai gondolkodás fejlesztése az információforrások és információk önálló, reflektív kezeléséért a középiskolák 11-12. évfolyama számára [Development of critical thinking supporting independent and reflective information handling for 11-12th grades high school students] In Nevelési Tudásdepó mintaprogramok, A Nevelési Tudásdepó projekt helye a közoktatás-fejlesztési stratégiában, különös tekintettel az innovációs potenciál fejlesztésének lehetőségei a nem formális és informális képzés területén, TÁMOP 3.2.4-08/2-2009-0001. URL:
http://olvasas.opkm.hu/Plugins/Interactive/Media/434/media/altamira_kritikaigondolkodas.pdf

[11]Regarding the person-centered approach in education see more in: Rogers, Carl R. (1961). On Becoming a Person. A Therapist's View of Psychotherapy. Boston, Houghton Mifflin.

the problem of gender equality but, of course, this topic can be substituted for other relevant topics appropriate to spark the discussion and boost critical thinking.

The first module is dedicated to the stage of attunement preparing students for the work with the chosen topic. In terms of critical thinking, this stage offers tasks to introduce the topic through the activation of personal life-experiences and brainstorming, encouraging students to begin to think about the given topic. Students should dare to speak, dare to translate into words their feelings and ideas representing their actual knowledge level and world view. In this phase of learning it doesn't matter whether their comments are true or false. The main goal of the first module is to motivate learners to count with the multiplicity of meanings and personal positions when starting to examine the new information. Later, in the next two stages they will have the opportunity to realize if they have some assumptions, misunderstandings and misbeliefs which should be corrected.

The tasks of the first module help students

- to start discussion on various topics,
- to practise the culture of meaningful participation and reflection,
- to share personal opinion and respects others' views,
- to accept the diversity of views, values and opinions of others,
- to communicate feelings and speaking personally,
- to link personal life-experiences with the new information or topic.

Examples for tasks in the first module:

1. Individual brainstorming about the term of equality. Sharing personal ideas in class, preparation of a common mind map. Examination of the multiple possibilities of logical relationships between the lines and circles organizing information.

2. Let's watch together a selection of short documentaries (titled Roles – not roles) focusing on Hungarian gender role problems raised in the fields of politics, labor market and family life. Try to express your opinion based on your personal experience. Listen to others' opinions and try to compare them with yours.

3. Work in pairs: read and discuss two contemporary texts about femininity and masculinity. One of them is a short story representing the viewpoint of a woman writer (Krisztina Tóth: The Soul is Megabody), the other one is a wallet from a male newspaper writer (Boldizsár Nagy: Why heterosexual men wear pink? On metrosexuality). Compare their style and view, share and discuss the result in class. Do you agree or disagree? Try to describe your points of agreement and disagreement.

4. Work in small groups: look at two pieces of art from feminist artists – Orlando's body art (Orlanopérations, 1987) and an installation from Orshi Drozdik (Manufacturing the Self: Brains on High Heels, 1992-1993). Try to find out the topic, compare the tools of visualization, talk about similarities and differences in their artistic language. Share your results in class, reflect to others' interpretations.

The second module of the pilot aims to support students through the process of new meaning making. In this module they learn detailed information, processing the chosen topic. The module reveals the multilateral nature of the new information, students can experience how the encounter with new information may happen, how to manage information effectively, and how to link the new information with the already known, previously accumulated personal experience and knowledge.

The tasks of the second module help students

- to approach problem-solving and learning through enhancing their self-awareness,

- to understand and accept the other person (her/his view, values, thinking, behaviour)
- to know how to reach and gather the most relevant information,
- to carry out independently a sub-task,
- to discuss conclusions, explore logical relationships, and link unrelated information (explanatory understanding),
- to practise objective assessment, analysis and evaluation of the content (critical understanding),
- to evaluate, select, arrange, synthesize, adapt or reject the new information.

Examples for tasks in the second module:

1. Let's watch together a gender documentary by Kriszta Bódis titled Grown Girl [Bárisé j] showing gender roles of a lovári gipsy community. Check the list of sentences cited from the film and evaluate their intellectual background, follow their judgment. Compare the values of the lovári community with yours. For home work read the article of a cultural anthropologist, Cecília Kovai, collecting detailed information on gipsy gender roles. Next time discuss which was the most interesting or strange information for you and explain why.

2. Bódis' film is a gender documentary. Try to figure out what the term of gender is about. Collect relevant information from online and printed information sources and try to define what gender means and in which disciplinary fields is applied. Direct your questions and remarks to the entire class.

3. Let's form small expert groups and choose one book for each from a list of books on different aspects of gendered view (e.g. in politics, scientific argumentation, advertising, cultural history and traditions etc.). For next time every group has to be well-prepared (read the book, discuss the thesis and issue, collect relevant information about the topic, prepare a powerpoint presentation). Next time introduce the authors' argumentation to your classmates, add your opinion and motivate others to discuss. Finally test the learning outcomes. Evaluate the presentations of each other.

   List of books: Joan Wallach Scott: Gender and the Politics of History; Thomas Laqueur: Making Sex: Body and Gender From the Greeks to Freud; Naomi Wolf: The Beauty Myth; Waris Dirie: Desert Flower; Miklós Hadas: The Birth of the Modern Man.

4. Let's read individually and interpret together the goals and tools of the Hungarian National Strategy for the Promotion of Gender Equality – 2010-2021 (1004/2010 I.21) What do you think about this strategy? Try to justify your opinion. What do you think would work best and why? Try to change and add some expressions and tools.

The third module focuses on metacognition, a particular form of reflection, a way of thinking about one's thinking. This module supports the settling of the newly learnt information and helps to build an in-depth understanding and new patterns of thought, creating new attitudes and new motivations for meaningful action.

The tasks of the third module help students

- to accept the ever-changing complexity of experiencing, understanding and interpretation,
- to stand both inside and outside their own interpretation so as to observe and understand it (gain insight)
- to accept others' views, values, thinking, and understand why they act as they do,

- to give others the freedom to develop their own interpretation based on their personal experience, without persuading them to have or hold another philosophy, principles or belief,
- to set goals and develop strategies for solving problems,
- to identify what tools, skills, knowledge, and resources they already have and what they still need for achieving their goals,
- to learn about their strengths and weaknesses, and identify further developmental tasks.

The best example for tasks in the third module is the Living Library project in which students are required to carry out a complex and collaborative work through the stages of planning, realization, monitoring and evaluation. This task aims to sum up students' critical thinking knowledge and helps them to practise various skills involved in it.

The Living Library is an equalities tool that seeks to challenge prejudice and discrimination, defending human rights. This interactive, non-formal educational tool aims to spark intercultural dialog and learning embedded in the metaphor of reading. It works like a 'normal library' where readers can browse the catalogue for the available titles, choose a book they want to read, and borrow it for a limited period of time. The one and only exception is that the book is a real person who is usually a member of minorities discrimination in the given country and culture. During the reading act readers can discuss their misbeliefs and ask about anything they are interested in.[12] Since the year of 2000, the first „menneske biblioteket" (human library) organised at the Roskilde Festival in Denmark, the living library tool has been widespread worldwide.[13] It is usually applied by youth workers, NGOs, teachers and librarians from more than 70 countries. It has been approved that the living library is an innovative and effective learning tool to foster participants' social skills (empathy, tolerance, communicative skills, sharing and accepting ideas and emotions), reducing prejudices, stereotyping and social exclusion.[14] In terms of critical thinking, prejudices and stereotypes are cognitive distortions based on essential learning processes such as categorization and generalization. „Stereotypes are frequently used to get the reader or the listener to believe that someone has a particular characteristic because s/he belongs to a particular group that allegedly has this characteristic. Stereotyping involves making hasty generalizations about entire groups from small samples." (Reichenbach, 2001, p. 128.) This kind of generalization is unconscious when thinking about 'normality'. This produces misbeliefs and simplifies the world, ignoring differences between individuals and judging others who seem to be 'strangers' because they differ somehow (socially, politically, culturally, or in age, lifestyle and life opportunities). Surrounded by images and fragments of information about others, people are left to their own imaginations and assumptions, phantasies and false expectations, influenced by their social norms (learnt from family, peers, subcultural groups, and from the media), resulting in a naive psychological judgment of others.[15] The living library event provides opportunity to reveal these unconscious cognitive patterns in one's thinking through personal meeting and discussion with those 'strangers'. Thus enables the reader (the learner) to identify and reduce stereotypes in her/his own thinking with the help of the relevant information provided from first hand, gaining direct experience about sensitive topics represented by the real life-stories of the living books.

[12]Abergel, Ronni [et al.] (2005). Don't judge a book by its cover! The Living Library Organiser's Guide. Strasbourg: Council of Europe Publishing. p. 9.
[13]Hungary was one of the first foreign countries to organise a living library in 2001 at the so called Sziget Festival in Budapest.
[14]For more detailed information about the history and international best practices of living libraries see the official website of the movement: http://humanlibrary.org/
[15]Abergel, op. cit. p. 10.

The living library project as a developmental task of the third module involves the following tasks:

- planning a complex project from the beginnings, starting from the first brainstormings and discussions about the general idea and goals of living libraries,
- discussion and decision about the most up to date living book subjects, identification of interesting or sensitive topics in the given country and local community
- planning the organisation process of a local living library event, dividing the students in small teamwork groups, each matching the competencies of their members,
- organisation of time and tools,
- getting in contact with partner NGOs to get living books and information materials,
- promotion of the event, creation of materials (logo, flyers, posters, facebook event),
- recruitment of attendants (readers) from high school and university communities,
- management of the event (e.g. cataloging, take care of the collection, provide reader's advisory and book loans, facilitate the creative corner with critical thinking activities, run information desks for the partner NGOs, install the exhibition)
- evaluation of the event from the viewpoint of the users (create questionaires both for the readers and the living books, collect and evaluate the questionaires, get feedback from the schools and NGOs involved in the project)
- evaluation of the event from the viewpoint of the living books (give them feedback based on the questionaires),
- evaluation of the event from the viewpoint of the organizer team (group discussion after the event, sharing good and bad experiences, bring together any lessons learned that can be usefully applied on future projects),
- writing a clear, informative article to be published in the local newspaper or in the newspaper of the university.

Pilot test – LIS students as critical thinkers

However the original version of the pilot targeted students from the final grades of high school, the methodology was flexible enough to be tailored to the needs of younger or older students, converted to either primary school students' or university students' critical thinking training as well. Given the Education Knowledge Depot tends to present tested pilots, I started to test the programme in the latter field, with the participation of my university students majoring library and information studies in Pécs.

In 2007 the students majoring in library and information studies in Pécs were the first who have had the possibility for information literacy specialization. This can be taken as a new result in the field of the Hungarian higher education as so far it has been the first initiative of independent information literacy studies based on a long-term and complex curriculum. The starting point of the specialization was the idea that the acquisition of information literacy demands special professionals with high-level information literacy who upon finishing the programme will be able to teach this kind of competencies in public and higher education. The overall objective of the specialization is to offer an in-depth and specialized information literacy for librarian students and to establish the pedagogical methods to be applied when teaching information literacy.[16] Within the curriculum of this specialization there is a course dedicated to the direct cross-disciplinary development of critical thinking, titled *Critical evaluation of information and information resources*. This two-semester-long course usually starts with the basics of the theoretical and methodological background of teaching and learning critical thinking. After that students are involved in the modular activities of the aforementioned pilot programme getting opportunity to experience how the developmental tasks work. The latter one serves double role: students test the efficiency of the tasks in the

[16]Zsák, J. (2008). Pedagogy of Information Literacy in the Curriculum of an Information and Library Studies BA Programme. *Practice and Theory in Systems of Education*, (3) pp. 7-14.

pilot, and parallely, the pilot tests the level of students' own critical thinking. Summarizing students' experiences regarding the methodological framework of teaching critical thinking, students are required to plan their own mini pilot programmes aiming to develop thinking skills in various settings of hypothetical school/library audiences and age groups of their choice. Since 2013, instead of this hypothetical planning, students have been involved in the planning and organisation process of local living library events. For the first time, in 2013, they joined an international project titled "Progetto Sherwood: Biblioteca vivente contro la discriminazione", financed by the Youth in Action Programme of the European Commission. In this project students and teachers were trained together, learning about the living library methodology, and finally they started to organise local living library events in their own countries (they came from Italy, Spain, Latvia, and Hungary). Hungarian university students from Pécs organized their first local living library in Spring 2014. In Fall 2015 and Spring 2016 they organized two further events, one of them was held at the university and the other one was held in a local high school.

The pilot test, attended by over one hundred students, started in Fall 2011. This number involves bachelor's librarian students who enrolled the original two-semester-long version and later, after the revision of their specialization, a shorter one-semester long version of the critical thinking course, master's librarian teachers who study in distance learning and enroll an eight-hours-long version, and some youth worker students who enrolled my educational psychology courses and learned about the living library tool.

For summarizing the benefits of the pilot, I prepared a short questionaire aiming to examine students' own perception about the improvement of their thinking, reading and writing performance.[17] In spite of their deficiencies, students enjoyed the interactive and collaborative work. Comparing to conventional learning styles, students accepted this more effective learning strategy which provided them opportunities to experience the diversity of meaning making processes. Thus enabled them to reflect upon the thinking and learning style of each other. Interactive and reflective learning shaped their critical approach to the given subject, content or problem, and enhanced their self-assessment and self-correction (e.g. to identify prejudices and stereotypes in their own thinking).

Students appreciated that the programme enhanced their social responsibility, they started to identify social problems in their closest personal environment and they realized their personal responsibility. Collaborative work, including the Living Library project, improved their understanding of Others (through practising empathy, tolerance, and sharing), and developed their critical approach of the personal habits and beliefs. From this viewpoint the topics of gender equality and living library were of great interest, both provided new and appliable knowledge, promoting fairmindedness and respect toward others' way of thinking and living. From this viewpoint the most effectively completed task was the Living Library project. (Béres, 2015) In the recent three years librarian and youth worker students organised very successful living library events at the University of Pécs and in the Radnóti High School of Pécs, aiming to promote human rights and critical thinking in Pécs. Students managed the aforementioned complex project organization process, offering living books such as gipsy, muslim, jewish, punk rocker, goth, ex-substance abused, disabled, and LGBTQ identity persons. The organizer team invited readers from various high schools and from the university. Their events attracted approximately 400 attendants, so they are among the most popular non-formal reader development activities of the city.[18]

As for the deficiencies of the students participating in the pilot test, students suffered from a kind of 'hunger of thinking structures'. They needed samples to understand how to organize

[17]The questionaire involved three simple feedback questions such as 1. Specify your favourite task and explain why was it useful for you? 2. How was your contribution in group works, which were your strengths and weaknesses? 3. What was the most important lessons learnt, experiences distilled from the pilot programme?
[18]For more details see the documentary of the first LL event: https://www.youtube.com/watch?v=hYdvB-CsazY

information in basic learning situations, for instance, when reading a book. This problem leads to the basics of critical thinking. I introduced the model of the elements of thought designed by Paul & Elder (2014) that helped students to follow the parts of thinking and argumentation in scientific and art materials I introduced in the pilot tasks. We placed emphasys on practising with graphic organizers and thinking maps revealing the logical connections between small part units of individual thinking. These tasks helped students to take into consideration the complexity of problems, understanding others logic, viewpoints, and solutions.

The second deficiency was related to students' poor group work competencies. „Universities have to respond to this need and prepare graduates for 21st century workplaces where teamwork skills are valued. Group work competencies are crucial since the solution to many complex problems requires individuals to collaborate to find solutions. At the same time, group work appeals as an efficient way to teach as workloads increase and available time diminishes." (Burdett, pp. 178-179.) In the case of our students participating in the Pécs pilot it was not easy to cooperate and solve complex tasks together with classmates. They usually divided the tasks in part units to be solved individually. For instance, when they were required to prepare a presentation in groupwork summarizing the main points of a book, one of them have read the book, another one searched for illustrations, and the third one made a handout and presented etc. From one hand, the final result of their work was not a real collaborative learning through common thinking, debate and compromises. From the other hand, instead of finding the main points of authors' argumentations, they were often confused and lost in details. This problem raised questions about students' poor reading and writing skills. The pilot offered tasks designed to improve these language skills through using different levels of questions to evoke discussions of fictional or non-fictional texts (e.g. analyzation and understanding of the logic of newspaper articles, scientific books, novels, performance and body art works, or personal reflective writing of fictional articles, news, essays, letters). I asked students to read and write using ideas to compare different points of view, or to evaluate the core values in the background of argumentations. Practising reading and writing skills revealed the strong need of a systematic support for developing language skills also at the university level which doesn't mean academic writing or CV writing training. For some years I offered a very useful and successful elective course for university students aiming to develop their general language skills in their mother tongue. This kind of course is exceptional in the traditional Hungarian university system which usually excludes the practising of basic skills, even though it is symptomatic that a number of students entering the universities have poor basic skills. Their reading and writing skills are poor and do not correlate with the knowledge demanded for upper level studies. With this background it is hard to teach them diverse disciplines and research-based learning since they have not yet mastered the basic skills. Language skills and thinking skills are the most basic skills without which there is no successful learning neither in public education nor in academic settings. If students have deficiencies we must support them regardless to their age and education level.

Conclusion

Promoting critical thinking is crucial in the development of successful students and it is one of the main success criteria of the mass acquisition of information literacy. The *Information Literacy Competency Standards for Higher Education* of ALA ACRL declared that developing lifelong learners is central to the mission of higher education institutions. By ensuring that individuals have the intellectual abilities of reasoning and critical thinking, and by helping them construct a framework for learning how to learn, colleges and universities provide the foundation for continued growth throughout their careers, as well as in their roles as informed citizens and members of communities.[19] The EACEA leaflet promotes

[19]Information Literacy Competency Standards for Higher Education. Chicago, ALA ACRL, 2000. URL: http://ala.org/ala/acrl/acrlstandards/informationliteracycompetency.cfm (03-09-2007)

citizenship education for building a European society characterised by pluralism, non-discrimination, tolerance, justice, solidarity and gender equality. According to the EACEA common objectives for EU Member States, critical thinking is of great importance. The Declaration urges the EU to ensure the sharing of ideas and good practice with a view to enhance critical thinking and media literacy, particularly in the use of the Internet and social media, so as to develop social, civic and intercultural competences, and resistance to all forms of discrimination and indoctrination, promoting democratic values, fundamental rights and intercultural dialogue through all forms of learning.[20] Summarizing it is clear that the mass acquisition of critical thinking targets general democratic goals, which can't be reduced to the instructional issue anymore, but raises questions related to the future opportunities of democracies shaped by critical citizens living in critical societies.

[20]Promoting citizenship and the common values of freedom, tolerance and non-discrimination through education. Overview of education policy developments in Europe following the Paris Declaration of 17 March 2015. Brussels, EACEA Education & Youth Policy Analysis, 2016. URL: http://eacea.ec.europa.eu/eurydice

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