Analysis of Curricular Content that Urges the Development of Critical Thinking of Pupils in Kosovo Schools

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Abstract

The development of critical thinking is conditioned by the action of many factors. To highlight this fact, I have focused on the opportunities offered by textbooks, teachers and learning activities for the development of the critical thinking of primary school pupils in Kosovo. The study begins from the idea that recognizing these opportunities opens the way for further improvement. The study was conducted with the participation of teachers and students. The textbooks of the primary school in Kosovo were also studied. The study has descriptive and mixed nature. His descriptive character is related to the description of the possibilities for the critical thinking development in the primary school, and the mixed character of methodology is related to the mixed nature of the collected data: textual facts, teachers’ opinions, learning practice / activities. The design of this research was conducted by combining three main methods: content analysis, interview and observation, by comparing each-other’s results of content analysis (tabs), teacher’s interviews, and observation in classes. This was done by analyzing the content of 24 textbooks (Literary anthology 1-5, Albanian Language 1-5, Civic Education 3-5, History 5, Art 1-5 and Music 1-5), 336 teachers were also interviewed and 336 lessons were observed. To collect data from the textbooks, an internationally recognized instrument for critical thinking has been modified, which is then adapted for the construction of an interview guide as well as for observing classroom activities. The study’s findings are interesting and important: it is noted that: the texts contain considerable opportunities for developing critical thinking, teachers have positive attitudes and classroom activities have useful elements that contribute to the development of critical thinking. Also, there are some differences from text to text, from teacher to teacher, and from one lesson to another. The study conclusions are descriptive and show which texts, opinions, and activities develop more critical thinking and which ones need further review and improvement. We come to some useful conclusions for both curriculum compilers (authors and publishers), their implementers, and inspectors.

Keywords: curriculum, critical thinking, pupil

1. Introduction

The critical thinking is considered as a high-level cognitive skill. Efforts of the curriculum compilers (curricular documents /textbooks), the text users, the teachers who organize and enable learning, evaluators of the efficiency of the teaching process, all these actors are increasingly considering the importance of students’ critical thinking and its further development.

In Kosovo, since 2003, there has been an intensive work in the field of education and especially towards curricular changes. The Curriculum Framework consists of a whole set of documents and measures set out for its implementation. The aim of the Curriculum Framework is to enable Kosovo citizens to face with the challenges of the 21st century and to actively generate new competing skills for the global labor market.

In accordance with the goals of the Kosovo education system (MEST, 2011), the main
competencies foreseen for the pre-university system in the Republic of Kosovo.

2. The Curriculum Theories Review

Among the most well-known scholars in the field of cognitive studies are psychologists: Jean Piaget, Lev Vigotskin, Jerome Brumer, John Bowiby etc. Different scholars have reviewed the fundamental issues of individual development and especially the intellectual development of the individual. The researchers point out that young children are active information masters.

According to the researches, after a ten-minute training session, the kids learned that a way to see the toys on their bed is to hit them with their leg. The essential element of Piaget's theory is that knowledge is built through the interaction of the human being with the surrounding environment.

It needs to be emphasized that no other theory of cognitive development has had such an impact on the thinking psychology of children as the theory of the Jean Piaget had. Cognitive theory focuses the attention of the individual on the fact that knowledge within the system and acquisition by the participants is fundamental to achieving success in curriculum development. The school should be able to predict the results of student engagement based on the curriculum, to be accurate the prediction should rely on knowledge. Doing a long-term observation, schools will have more success in designing and implementing the right curricula. This approach implements the systematic thinking of people involved in the curriculum, increasing to the maximum the participation and learning of all actors: students, teachers, school leaders, etc. To successfully realize this method when designing the curriculum, the individual should understand the people and especially the differences between them (Bradley, 1993). According to cognitive theory, children go through four stages of their cognitive development. These stages differ from each other both by the amount of information and the quality of the information. Children's understanding of the world is specific compared to adults. With Piaget's studies, a revolution has occurred in understanding childish thinking, just like Copernicus that revolutionized understanding of the solar system. According to cognitive theory, to successfully solve the problems that they face, children must develop a cognitive structure or a mental scheme. The scheme is conceived as a whole of knowledge that the individual possesses or represents a mental painting of the world. In this sense, the school curriculum is also seen as an overview of the education system where many specialists see the curriculum as a major system whereas the teaching as subsystem in the implementation of the curriculum (Ornstein, 1986). This mental painting of the children’s world on the one hand and this major curriculum system on the other hand are on a common front to the scientific innovations of the century that we live. Thinking is a miraculous and complex process, and Piaget has developed such a wonderful and complex theory to explain this process (Piaget in Komani, 2004). Piaget devotedly studied the process of competency building in children, he explained how the children develop knowledge about the world around them, and how they think about solving problems, and how these cognitive processes change in stages from birth to maturity. For the cognitive development of children, Piaget considers important three processes that enable thinking systems to be developed: assimilation, accommodation and equilibrium. Creating an environment for good cognitive development requires the stimulation and harassment of the child curiosity. Based on such environments, curriculum and textbook compilers should also put curriculum content that also promotes critical thinking. Piaget points out that children build their knowledge by giving meaning to people, events, and the world around them. Building on learning (Piaget in Hendrick, 1992). This implies that children better understand when they do something, they create a personal understanding of what happens instead of getting the information from the adults.

From these points of view, we can conclude that during pre-school age, he/she should be more active during learning by directly and actively participating in knowledge building. According to him, eg. children may be interested in how plants grow, if the teacher reads a teaching unit with illustrations of how the trees grow, this lesson will increase the level of students' knowledge. But if the child has the opportunity to actually plant a sapling, the level of knowledge is higher and more sustainable. Curricula whose content links the theoretical aspect to the practical one and fits into the understanding skills and the curiosity of the children, these children-pupils will of course have a more developed thinking compared to pupils who are not given such a chance.
The Piaget also emphasized the importance of the game as a way to develop a thinking plan for children and at the same time as a very important activity to learn. Children do not hesitate in any case to respond to a play invitation even when they are tired or sick, the game enables the child unity development in the physical, intellectual and social aspect. But how does the game affect the cognitive development? The game helps cognitive development and vice versa, through the game the children learn about their world objects that surround them, how these objects work or how they are made. If children are involved in a game as symbolic as it could be, they give meaning to the objects (by building an object out of the sand, or by watering the garden he/she plays the role of the firefighter). During the development of the game children may also make mistakes which can be corrected by repeating the activity and getting new information about the real world that surrounds them.

According to Piaget, during this period the ability of the children to solve the problems logically increases considerably. At this stage, educators and parents are required to harass children’s thinking through curious activities. Children of this age now understand that the quality of things does not change with the change of appearance. Children who have had a rich experience with appropriate activities and tools will be ready for the next phase, it means the phase of concrete operations. The next stage is about formal operations involving children over the age of 12. In addition, children are not egocentric and do not show concentration in all cases. Likewise, the child is more competent in conserving the number than Piaget thought (Piaget in Karaj, 2005).

3. Purpose of the Study

The purpose of this study is to explore and measure to what extent textbooks, teacher competences and classroom activities create opportunities for developing critical thinking of primary school pupils in Kosovo and to make relevant recommendations.

In the context of this study, the objectives present specific goals in the realization of scientific-research work such as:

The first goal is to measure the amount of facts contained in the textbooks of the 1-5 grades in Kosovo and to evaluate the opportunities that those facts give to the development of pupils’ critical thinking;

The second goal is to measure teachers’ efforts to use the existing facts and to create new opportunities for developing the critical thinking of pupils during classes;

The third goal is to measure pupils’ involvement in learning activities with the focus on developing their critical thinking.

The realization of these objectives enables us to have access to information on the possibilities of the primary school textbooks for the development of the pupils’ critical thinking, data for the opinions and the practices of the teachers for the organization of the teaching for the development of critical thinking and data for the teaching activities that develop the pupils’ critical thinking.

4. Methodology

The design of this research was conducted according to the combination of three main methods: content analysis, interviews and observations. Comparing the results from the content analysis (tabs), from interviews with the teachers and observations in classes, some useful conclusions can be reached, both for curriculum compilers and for their implementers. This research design is quite present in the researches carried out in the field of education (Gav, L.R Mills & G.E, & Airasia, P. 2006). The cause and effect of this research have occurred before, so this design can be found even with the ex-post-facto design meaning "after the fact has occurred" (Fraenkel, J.R & Wallen, N.E, 2008). This research will reveal the opportunities that textbooks and teachers offer to the development of the students’ critical thinking. Also, by comparing the results averages, one can see which of the textbooks, learning units have contributed to raising the level of opportunities for the critical thinking and we can also see which of the textbooks or lessons provide less opportunities for developing students’ critical thinking. Both for the first and for the second case, these results will be
useful for curriculum developers, especially text authors, to see the strengths and weaknesses of
the text for the critical thinking development. For this purpose, descriptive statistical analyzes will be
used that explain the central tendency such as: the mean, median and mode, the minimum,
maximum values, etc., which enable conclusions on the population, based on sample
characteristics (Coladarci, Th & Cobb, CD, 2004).

4.1 The study Instruments

The tab for the measure of possibilities of textbooks for the critical thinking development is a matrix
for scanning texts. It is based on the Delphi Report tab. This tab contains six dimensions for
developing critical thinking. The second instrument is the observation tab which provides
information on 8 (tabs) dimensions of the critical thinking in classroom, pupils' involvement and
learning activities, divided at the intervals mentioned above. The purpose of using this instrument
was to collect data to activate critical thinking of pupils in the learning activities. And the third
instrument is the questionnaire, this instrument constitutes an adapted form of the modified tab
based on the Delphi Report to assess the opinions of the teachers whether the textbooks offer
opportunities for the development of critical thinking. These thoughts were extended to a Liker-type
scale.

The evaluation of these texts was made on the basis of the tabulation, which was constructed
according to Bloom's taxonomy level, including the fields or dimensions of critical thinking and
indicators for each field separately (Facione, 1990).

5. The Results of the Study

5.1 The results from the comparative analysis of dimensions for developing critical thinking in
primary school textbooks.

<table>
<thead>
<tr>
<th>Textbook</th>
<th>Interpretation</th>
<th>Analysis</th>
<th>Assessment</th>
<th>Conclusion</th>
<th>Explanation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literary Anthology</td>
<td>369</td>
<td>384</td>
<td>225</td>
<td>299</td>
<td>306</td>
<td>1583</td>
</tr>
<tr>
<td>Albanian language</td>
<td>259</td>
<td>287</td>
<td>192</td>
<td>256</td>
<td>304</td>
<td>1298</td>
</tr>
<tr>
<td>Civic education</td>
<td>189</td>
<td>244</td>
<td>161</td>
<td>237</td>
<td>267</td>
<td>1098</td>
</tr>
<tr>
<td>History</td>
<td>87</td>
<td>70</td>
<td>29</td>
<td>59</td>
<td>64</td>
<td>309</td>
</tr>
<tr>
<td>Art</td>
<td>262</td>
<td>387</td>
<td>213</td>
<td>271</td>
<td>266</td>
<td>1399</td>
</tr>
<tr>
<td>Music</td>
<td>145</td>
<td>162</td>
<td>99</td>
<td>168</td>
<td>185</td>
<td>759</td>
</tr>
</tbody>
</table>

Source: by author

Of all dimensions that provide opportunities for developing critical thinking of students in the
textbook literary anthology 1 - 5, the most appreciated dimension is that of analysis. After analysis,
this text is evaluated for the dimension of interpretation, then for the explanation, conclusion, and
finally for assessment. The literary anthology for grades 1 to 5 is also considered as the one that
provides the most opportunities for developing the student's critical thinking.

According to the analysis of the results on dimensions that provide opportunities for the
development of the pupils' critical thinking in the textbook Albanian language 1-5, the most
appreciated dimension is that of explanation. After explanation, this text is evaluated for the
dimension of the analysis then for the interpretation, conclusion and finally for the assessment.

Analysis of the data for the presentation of the most valued dimension in the textbook Civic
education 3-5 is the dimension of explanation. After this dimension, there are the dimensions of
analysis, conclusion, interpretation and finally the dimension of interpretation.

From the dimensions that provide opportunities for the development of the pupils' critical
thinking in the textbook History 5, the most appreciated dimension is that of interpretation. After
interpretation, this textbook is evaluated for the dimension of the analysis, then for the explanation,
conclusion and finally for the assessment.

According to the results obtained for the dimensions that provide opportunities for the
development of pupils' critical thinking in the textbook Art 1-5, the most appreciated dimension is that of analysis. After analysis, this text is evaluated for the dimension of the conclusion then for explanation, interpretation and finally for the assessment.

From the dimensions that provide opportunities for the development of the critical thinking of students in the textbook Music 1-5, the most appreciated dimension is that of explanation. After explanation, this text is evaluated for the dimension of the conclusion then for the analysis, interpretation and finally for the assessment.

5.2 The results from the teachers' opinions for the development of critical thinking

According to the teachers' estimates, the literary anthology texts 1-5 provide about 483 opportunities for developing pupils' critical thinking and are evaluated at the over average level 4. According to the estimation of the curriculum content (tabs) in the literary anthology texts 1-5, the literary anthology texts provide more opportunities for the critical thinking development than the literary anthology textbooks for grades 1, 2 and 3. The Albanian language texts 1-5 offer about 405 opportunities for developing the critical thinking of pupils and are evaluated at the over average level 4. According to the evaluation of the curriculum content (tabs) in the Albanian language texts 1-5, the largest number of estimates for the opportunities for the critical thinking development got the Albanian language textbooks for grades 3 and 4. While Civic education textbooks 3-5 provide about 263 opportunities for developing the critical thinking of pupils and they are also evaluated at the over average level 4. Regarding the content of curricula (tabs) in the Civic education textbooks 3-5, the largest number of estimates for critical thinking development opportunities received the civic education textbooks for grades 3 and 4. According to the teachers' estimates, the textbook History 5 provides about 100 opportunities for developing the critical thinking of pupils and is evaluated at the over average level 4. The Music textbooks 1-5 provide about 441 opportunities for developing the pupil's critical thinking and are evaluated at the over average level 4. The Music textbooks for grades 2 and 4 are the texts that give the most opportunities for critical thinking development regarding the curriculum content assessment. Finally, the teachers' estimates on Art textbooks 1-5 show that they provide about 489 opportunities for developing the critical thinking of pupils and are evaluated at the over average level 4. Regarding the curricular content (tabs), the Art textbooks for grades 2 and 3 are the texts that give the most opportunities for critical thinking development.

5.3 The results from the Classroom Learning Activities for the development of critical thinking

According to the results of the classroom learning activities in classes of the literary anthology 1-5, the critical development dimensions are assessed at level IV. While during the observation of classes of the Albanian language 1-5, these dimensions are estimated at the average level III. The observation of classes Civic education 3-5, the dimensions of the critical thinking development are estimated at the over average level 4. In the classes of History 5, these dimensions are estimated at level 4. While during the observation of the classes of Music 1-5, the dimensions of the critical thinking development are estimated at the subaverage level 2. And the observation of classes of Art 1-5, the dimensions of the critical thinking development are estimated at the average level 3.

6. Results and Recommendations

Regarding the textbooks of Literary anthology 1-5, there are three findings:

The first finding comes from the data of the content analysis (Scanning) of the Literary anthology textbooks (third element of methodology). According to this analysis, the most featured dimension for the development of critical thinking is that of analysis. Analysis means the possibilities for elaborating the presented idea, the presentation of arguments, and the distinction of arguments, (value 384). While the most appreciated operation in these texts is categorization, which implies presenting the facts / elements of a phenomenon in an organized manner in certain categories, (value 225).
The second finding comes from the collected data through teachers interviews (third element of methodology). According to this analysis, the most featured dimension for the development of critical thinking is that of analysis as well, (value 215). In most cases, from the evaluation of the learning content, there has been found much more content compared to what teachers have said.

The third finding comes from the data collected through observation of the classes in the relevant subjects (the third element of the methodology). According to this analysis, the most prevalent value in the five-level scale is 4, a relatively high level which means that the lesson creates opportunities for the use and development of the critical thinking of pupils.

The first conclusion of the study is that in the course Literary anthology 1-5, the textbook gives pupils the most opportunities to do analysis and this is a finding that stems from the three used methodologies. The fact that teachers estimate less methodological evidence than classroom scanners and observers is likely to be explained with the difficulties that teachers have to identify the certain dimensions and their lack of familiarity with the used methodology.

Regarding the textbooks of the Albanian language 1-5, there are three findings:

The first finding comes from the data of content analysis (scanning) of the Albanian language textbooks. According to this analysis, the most featured dimension for the development of critical thinking is that of explanation. Explanation means the possibilities for justification of the operation with information, the highlight of findings and argumentation of conclusions, (value 304). While the most appreciated operation in these texts is expressive wealth. Expressive wealth means the volume of different words in the text, different artistic creations, different synonyms of words, (value 112).

The second finding comes from the data collected through the interview of teachers. According to this analysis, the most featured dimension for the development of critical thinking is that of explanation, (value 217). In most cases, from the evaluation of the learning content, there has been found much more content compared to what teachers have said.

The third finding comes from the data collected through observation of the classes in the relevant subjects (the third element of the methodology). According to this analysis, the most prevalent value in the five-level scale is 4, a relatively high level which means that the lesson creates opportunities for the use and development of the critical thinking of pupils.

The second conclusion of the study is that in the course Albanian language 1-5, the textbook gives pupils the most opportunities to make explanations and this is a finding that stems from the three used methodologies. The fact that teachers estimate less methodological evidence than classroom scanners and observers is likely to be explained with the difficulties that teachers have to identify the certain dimensions and their lack of familiarity with the used methodology.

Regarding the textbooks of the Civic Education 3-5, there are three findings:

The first finding comes from the data of content analysis (scanning) of the Civic education textbooks. According to this analysis, the most featured dimension for the development of critical thinking is that of explanation. Explanation means the possibilities for justification of the operation with information, the highlight of findings and argumentation of conclusions, (value 267). While the most appreciated operation in these texts is the expression of conclusions. The expression of conclusions implies the completion of the order in the learning unit and can also help to present new ideas in the relevant field, (value 93).

The second finding comes from the data collected through the interview of teachers. According to this analysis, the most featured dimension for the development of critical thinking is that of explanation, (value 126). In most cases, from the evaluation of the learning content, there has been found much more content compared to what teachers have said.

The third finding comes from the data collected through observation of the classes in the relevant subjects (the third element of the methodology). According to this analysis, the most prevalent value in the five-level scale is 4, a relatively high level which means that the lesson creates opportunities for the use and development of the critical thinking of pupils.

The third conclusion of the study is that in the course Civic education 1-5, the textbook gives pupils the most opportunities to make explanations and this is a finding that stems from the three used methodologies. The fact that teachers estimate less methodological evidence than classroom scanners and observers is likely to be explained with the difficulties that teachers have to identify
the certain dimensions and their lack of familiarity with the used methodology.

Regarding the textbook History 5, there are three findings:

The first finding comes from the data of content analysis (scanning) of the History textbook. According to this analysis, the most featured dimension for the development of critical thinking is that of interpretation. Interpretation means opportunities for categorizing the facts, the expression of ideas with clarity and the expressive wealth of the text, (value 87). While the most appreciated operation in these texts is the expression of conclusions. The expression of conclusions implies the completion of the order in the learning unit and can also help to present new ideas in the relevant field, (value 30), the argumentation of conclusions implies that the conclusions are logical and meaningful, (value 30) and the expressive wealth implies the volume of different words in the text, different artistic creations, different synonyms of words, (value 30).

The second finding comes from the data collected through the interview of teachers. According to this analysis, the most featured dimension for the development of critical thinking is that of interpretation, (value 42). In most cases, from the evaluation of the learning content, there has been found much more content compared to what teachers have said.

The third finding comes from the data collected through observation of the classes in the relevant subjects. According to this analysis, the most prevalent value in the five-level scale is 4, a relatively high level which means that the lesson creates opportunities for the use and development of the critical thinking of pupils.

The fourth conclusion of the study is that in the course History 5, the textbook gives pupils the most opportunities to make interpretations and this is a finding that stems from the three used methodologies. The fact that teachers estimate less methodological evidence than classroom scanners and observers is likely to be explained with the difficulties that teachers have to identify the certain dimensions and their lack of familiarity with the used methodology.

Regarding the textbooks Music 1-5, there are three findings:

The first finding comes from the data of content analysis (scanning) of the Music textbooks. According to this analysis, the most featured dimension for the development of critical thinking is that of explanation. Explanation means the possibilities for justification of the operation with information, the highlight of findings and argumentation of conclusions, (value 185). While the most appreciated operation in these texts is the argumentation of conclusions. Argumentation of conclusions implies that the conclusions are logical and meaningful, (value 67)

The second finding comes from the data collected through the interview of teachers. According to this analysis, the most featured dimension for the development of critical thinking is that of conclusion and interpretation, (value 210).

The third finding comes from the data collected through observation of the classes in the relevant subjects. According to this analysis, the most prevalent value in the five-level scale is 4, a relatively high level which means that the lesson creates opportunities for the use and development of the critical thinking of pupils.

The fifth conclusion of the study is that in the course Music 1-5, the textbooks give pupils the most opportunities to make explanations and this is a finding that is not equally evaluated by the teachers. Teachers evaluate that the dimensions of conclusion and interpretation give more opportunities for developing critical thinking than the other dimensions. The fact that teachers evaluate two other dimensions compared to scanners is likely to be explained with the difficulties that teachers have to identify the certain dimensions and their lack of familiarity with the used methodology.

Regarding the textbooks Art 1-5, there are three findings:

The first finding comes from the data of the content analysis (Scanning) of the Art textbooks. According to this analysis, the most featured dimension for the development of critical thinking is that of analysis. Analysis means the possibilities for elaborating the presented idea, the presentation of arguments, and the distinction of arguments, (value 387). While the most appreciated operation in these texts is clear argumentation. The clear argumentation means the presentation of facts / elements of a phenomenon based on argument, (value 143).

The second finding comes from the data collected through the interview of teachers. According to this analysis, the most featured dimension for the development of critical thinking is...
that of interpretation, (value 211). In most cases, from the evaluation of the learning content, there has been found much more content compared to what teachers have said.

The third finding comes from the data collected through observation of the classes in the relevant subjects. According to this analysis, the most prevalent value in the five-level scale is 3, a relatively average level which means that the lesson creates opportunities for the use and development of the critical thinking of pupils.

The sixth conclusion of the study is that in the course Art 1-5, the textbooks give pupils the most opportunities to do the analysis and this is a finding that stems from the scanning of the curriculum content while the teacher’s assessment is for the dimension of interpretation. The fact that teachers evaluate two other dimensions compared to scanners is likely to be explained with the difficulties that teachers have to identify the certain dimensions and their lack of familiarity with the used methodology.

References