How to Analyse Textbooks. An Essay on Research Approaches and possible Consequences of Research

Sergiu Musteăţă
Doctor în istorie
Fellow la New Europe College, Bucharest

Today education can take on many forms and can rely on various aides. Among the available approaches are: oral (discussions, debates, etc.), written (research papers, stories, legends, narrative sources, essays), visual (pictures, paintings, maps, charts, theater, museums, TV, newspapers, cinema, Internet, etc.) (Learning (1997): 71-74; Wenger (1997): 75-78). A school textbook comprises the majority of these approaches; it combines text, illustrations, charts, and at the same time provides a number of suggestions as to additional methods of learning in a given subject area. So, nowadays the textbook becomes a specific “instrument of the mass information” (Lessig (2010): 5).

Textbooks are written by mature people, but are addressed, in special for children. M.S. Osipova puted a very interesting and actual question - How it is possible to understand the kids’ world if the mature can not understand themselves? (Osipova (2010): 142). To answer to such questions we have to learn more about textbooks and to develop the textbook analysis as a scientific perspective.

Since the 19th century the school textbook became a propaganda tool used by the state to promote the values characteristic of the given governing regime: nationalist, conservative, progressive, socialist, racist, etc. (Giordano (2003): see chapters 2, 3, 4, Textbooks as propaganda – the nationalistic era; Textbooks as propaganda – the racial era; Textbooks as propaganda – the gender era; Textbooks as propaganda – the religious era). Textbooks produced during the Cold War were also strongly influenced by the ideological clashes between the two main blocs. Especially in the aftermath of the Cold War, but in many cases already after the Second World War, there was a strong sense of urgency to stop the promotion of mutual hatred and to encourage peace as well as understanding among the nations of the world, irrespective of race, ethnicity, religion, culture, and language.

The international practice of the 20th century shows the topicality and importance of analytical studies focusing on school textbooks (Clement (1942); Banovitch (1965): 83-98; Wayne (1971); Pingel (1999). Such research helps both to assess the level, quality and needs of education systems (Mikk (2000): 9), as well as to exclude factual errors, prejudices and stereotypes from curriculum content (Pingel (1998): 37-48; Burlbaw, Field (2005). UNESCO and the Council of Europe have urged the nations of the world to encourage cooperation in textbook development with an eye to contemporary realities and
ensure a multidimensional and transparent approach to one’s cultural past based on scholarly research (UNESCO (1995). The international initiative to revise textbooks has become a new scientific subject named textbook research or analysis (Pingel (1999): 28; Schimdt (2008).

The various research visits to the Georg Eckert Institute for International Textbook Analysis I have undertaken in recent years within several research projects supported by this institute have inspired me to write an overview of contemporary research literature. The objective of my study was to present the methodology of textbook analysis and to provide interested scholars with a useful tool to develop and further their own research in this flourishing field. The work selectively presents a number of ways, criteria and methods of analysis, supported by historical examples and case studies. I believe that this study could help stimulating the development of a more objective textbook assessment, give an impetus for new analytical studies in the area of textbook analysis and serve as an orientation for would-be textbook authors.

All of the people involved in educational processes have certain expectations of textbooks (Marsh (1997): 86). A textbook is generally expected to be in line with current realities, have an easy-to-understand content and to be inexpensive. Each author, publisher and user has certain expectations, too. A teacher, for example, wants the textbook to be a relevant source of and tool in teaching, featuring new, better edited content, information rather than blunt statements, new sources rather than interpretations, specific topics as well as innovative and original ideas as to how to organize a class; the textbook ought to create a context for developing opinions rather than impose opinions, and offer possibilities of using interactive teaching methods and fun exercises, useful tasks and practical suggestions for the ongoing and the final assessments.

Pupils and parents, however, expect the textbook to contain information which is easy to acquire and synthesize, topics of direct relevance to the school curriculum and the final exams; the textbook should be attractive, interesting and - which is as important - cheap. The author of a textbook wants his or her work to be original, offer topical and interesting information so that teachers and students may use it in schools. Publishers, in turn, expect a textbook published by them to be original and of good quality, to be accepted and used widely by teachers and students. In all, they expect the textbook to be bought so that it becomes profitable.

Over the course of time the school textbook has become more than just a teaching tool - it is also a source for research (Choppin (1992): 198-202). Textbook analysis has become a well-developed research field in Western countries (Bourdillon (1992). The research done in this area has a significant impact on national and international educational policies. The main purpose of analysis projects is to identify a textbook’s strengths and weaknesses, and to eliminate “negative” features (errors, distortions, prejudices, clichés, etc.) (Fritzsche (1992): 52-59). This is why textbook analysis ought to become an integral part of the reform and development of educational systems.

A variety of methods regarding textbook analysis are used in practice; a combined approach is frequently used, which ensures a higher level of
objectivity of the results. The more complex and refined the analysis, the lower is the probability of error – at least this is what we would expect as scientists. The practice of textbook assessment shows that individual studies are more objective than the studies carried out by institutions (Mikk (2000): 75). In any event, the analysis should be part of a multilateral and interdisciplinary process (Weinbrenner (1992): 21-34), which is to be carried out by a combination of ways, criteria, methods and tools, all of which are component elements of a coherent strategy (Kalmus (2003): 9-11). Textbook analysis should include all the components of a textbook; not only its textual side, since the didactic, pictorial, graphic and technical aspects of textbooks are all part and parcel of the message the textbook communicates to students and teachers (Slater (1992): 14).

There is a whole plethora of textbook analysis methods; however, I believe that four of them are especially important and relevant: textbook testing, surveying, analysis, and research.

**First**: One important approach in assessing the quality of a textbook is to test it in the praxis of the school environment. The experimental use of a textbook in teaching usually helps identify its real effectiveness and possibly ways of improving it before the textbook is mass produced. The parallel piloting of two textbooks for the same subject matter and at the same educational level, and the comparative analysis of the ensuing results, is a more effective method than testing only one textbook.

**Second**: Another approach to analyzing textbooks is by means of a survey, which is not only a subcategory or a tool of analysis but a separate method as well. Unlike in the case of piloting, in the case of analysis by survey the actors involved in developing, approving, publishing and using textbooks are interviewed after the textbooks have been introduced in schools. The process of surveying is simply a way to explore the opinions of the respondents, although it is as effective in textbook assessment. The content of the questions addressed to teachers, students, author, etc. will depend on the purpose of the survey, although the main topics are usually the quality and utility of the textbook. The answers provided by the respondents will help identify the textbook’s strengths and weaknesses, etc.

**Third**: Textbook assessment is a third analytical approach (which I delineate from “textbook research” as you will see below), which is usually less expensive, but which yields similarly useful results. The difference between piloting, surveying and assessing is that in the latter case the textbook is studied thoroughly, before it is recommended for publication. This is done by a team of experts (evaluators) selected, usually, by the Ministry of Education. In some political circumstances objections will need to be raised in relation to the nature and objectivity of thus appointed team. The fundamental criteria that should guide the persons included in the evaluation teams are: representativeness, professionalism, objectivity, impartiality, and alertness.

---

1 The author shows that when establishing the optimal relevance of a textbook in 90% of cases independent studies are used and in only 75% of cases assessment coordination institutions are used.
Fourth: Textbook research represents the fourth approach by which a textbook can be analyzed. This research should contain a series of independent actions involving different researchers. This however does not mean that the independent experts or institutions specializing in textbook analysis cannot be involved also in piloting, surveying or assessing textbooks. Textbook research pursues the goal of either a full analysis of a textbook or set of textbooks, or the study of various aspects contained in school textbooks. Unlike the other analysis methods, textbook research studies not only new or current books but also those which have already become obsolete. In the latter case the researchers are usually tracing the evolution of the approach to various topics, values, concepts, discourse analysis, etc. used in textbooks from different countries and previous periods. However, the research can also look at such aspects as the textbooks’ approach to controversial or specific subjects at the national and international level, such as, for example, the way the Holocaust or certain wars are taught in history textbooks, or how totalitarian regimes (fascism, communism) are approached in different countries. The complex nature of this method stems from its comparative and multidisciplinary approach.

It has to be mentioned that in order to offer an effective assessment of the quality of textbooks specific analytical methods and techniques are required (Banovitch (1965): 83-98; Merten (2003): 11-22; Nicholls (2003). One can emphasize - out of the great number of existing empirical and hermeneutic methods, explicit and implicit formulations analysis methods, status quo analysis methods, etc. (Weinbrenner (1986): 321-337; Weinbrenner (1990); Weinbrenner (1992): 21-34) - two main categories of textbook analysis methods: quantitative and qualitative (Pingel (1999): 45). Each type of method provides answers to a certain type of questions (Weinbrenner (1992): 21-34). These methods can be used both independently from each other as well as together, depending on the objective of the analysis; the qualitative method provides a comprehensive evaluation of the textbook’s quality.

The quality of textbooks can be judged according to several principles and criteria (Wain (1992): 35-41). According to some of them a given textbook will turn out “good”, while others will shows that it is “bad” - so what should the final assessment be? It is for this reason that for textbook analysis, especially in the case of books which are in the process of being approved or recommended, a common set of criteria and principles is needed, which will guide the evaluators. The main principles are the objectivity, alertness, and impartiality of the evaluators. The criteria are set depending on the purpose and objective of the analysis. The annex shows a list of such criteria, which are described in this paper.

A textbook is developed by a number of actors: on the one hand, it is the publishers who hire the authors, and on the other hand it is the state institutions which approve and recommend the textbook to be used in schools. In either case the textbook is a product of society; a textbook is developed by

---

1 The research into the evolution of certain topics and subject matters is called vertical analysis, while the study of new and stimulating ideas is called horizontal analysis.
both public and private institutions. In a market economy a textbook becomes an industrial product (Apple (1991): 28) whose competitiveness on the market depends largely on the manufacturer’s experience and investment capacity, as well as on the price/quality ratio. Also, a significant aspect is the purchasing capacity of the potential customers - this factor is to be kept in mind by the publishers. Thus, the quality of a textbook depends to a large extent on the political and socio-economic realities in a specific given country (Special (1970): 14-19).

Given its educational, professional, institutional, commercial importance, the textbook oftentimes creates tensions in society: between teachers and students, teachers and parents, teachers and authors, authors and publishers, publishers and the government, etc. (Damiano (1993): 65). The school textbook is part of a dynamic network and is subject to economic and political influences (Apple, Christian-Smith (1991): 5). The quality of textbooks also depends on a number of factors which are part of the development, selection, approval and recommendation of a textbook to be used, disseminated, analyzed, etc. (Weinreich (1995): 134). Thus, the quality of a textbook is dependent on the quality and attitude of the people involved in the process.

The lack of experience as well as of well-defined and school-adequate methods and criteria in the process of curriculum and textbook development has led to some mistakes. Today one can hear considerable criticism of school textbooks: the book is too difficult for students, it is not interesting, it is too easy, contains many mistakes, does not meet the requirements of a modern school, etc. (Urve (1991): 28). Some textbooks are even avoided by teachers, who then seek alternative sources for their teaching. In Moldova the competition between various authors and publishers failed to generate the expected outcome.

One could say that there are no ideal textbooks, but there is no doubt that there are better and worse textbooks. A publisher’s natural drive is to increase the quality of the content and design. Ideally, publishers and authors together should agree on the concept, content, level and design of a textbook. Then they should monitor its use in practice, create a distribution network, but also analyze the textbook’s educational impact. A direct link to the customers is needed in order to monitor the usefulness and quality of the textbook and, hence, identify possible improvements. The customers (teachers, students) should be able to send their suggestions concerning the quality of the textbooks to publishers. But what does such participation amount to in practice? Are such suggestions and opinions taken into account? This is why a complex system is needed to ensure real and objective feedback. The Ministry of Education, research institutions, as well as the publishers and authors can research and analyze textbooks independently. In order to give an objective assessment to the quality of the textbooks it is necessary to secure the cooperation of specialists from various fields: school teachers, psychologists, designers, linguists, relevant researchers, etc. Such expert groups (assessment committees)
should be supported by the state within research institutions\(^1\). The publishers should take into account the opinions of the teachers and the outcomes of such studies. Only by securing cooperation among authors, publishers, and customers can one eliminate errors and increase the quality of textbooks. The school textbook ought to become an example of a professional partnership and consensus.

When the analytical goals and objectives, as well as the terms are clearly defined, it is easier to select the ways, criteria, methods and techniques needed to build an evaluation table (\textit{A handbook} (1949): 81-82; Oppel (1976) or guide.

So, at the end of my paper I included a list of analysis criteria for school textbooks, which could be used in an assessment questionnaire (\textit{Annex}). But, one should keep in mind that each analysis method has its own implementation methodology\(^2\).

\section*{Annex}

\textbf{Criteria for Textbooks’ Analysis}

\section*{I. Formal criteria}
\begin{enumerate}[I.1]
\item Bibliographical references (title of textbook, names of the authors and the publisher)
\item Professionalism of the authors (education, research experience, teaching experience, textbook writing experience)
\item Experience of the publisher (nature of the publisher, experience with school textbooks, reputation on the market)
\item Customers (educational level, grade)
\item Textbook edition (1st or 2nd, 3\textsuperscript{rd}, etc.)
\item Size and weight
\item Copyright, including the copyright of illustrations used
\item Price
\item Textbook supplements (teacher’s guide, student’s exercise book, maps, etc.)
\end{enumerate}

\section*{II. The textbook’s thematic concept}
\begin{enumerate}[II.1]
\item The authors’ rationale in writing the textbook (in preface or introduction)
\item Adequate to curriculum requirements and objectives
\item Information novelty and topicality
\item Promotes democratic values and develops a responsible citizen
\end{enumerate}

\section*{III. Textbook content}
\begin{enumerate}[III.1]
\item Content adequate to the subject matter
\end{enumerate}

\footnotesize
\(^1\) Usually assessment committees are created spontaneously and irregularly, which has an impact on the quality and objectivity of their work.
III.2 How content is selected (depending on curriculum, student motivation and intelligence)

III.3 Textbook structure (table of contents, user’s guide, introduction, content, conclusions, bibliography, index, glossary, annexes)

III.4 Titles of chapters and topics (should be relevant to subject covered, should encourage learning, should be neutral, should not be discriminatory)

III.5 Narrative text (the contributions of the authors should correspond to the educational objectives set in the curriculum, the text should correspond to the title of the topic or chapter, should be scientifically accurate, impartial, should approach subject matter from the angle of various problematics, should be balanced and adapted to the age of the students, should relativize, should preserve continuity with previous subjects and should open the way to following topics)

III.6 Subjects to be approached from multiple angles and controversial subjects should be interpreted in a comparative way

III.7 Multiple points of view and intercultural approach

III.8 Arguments to support the ideas presented

III.9 Compatibility of sources (documents, pictures) and the author’s text and clarity of paratext.

III.10 Diversity of sources in terms of form, opinion, chronology and space, voice—social status, sex, age, level of culture

III.11 The sources should not represent authoritative arguments for the author’s text but should rather be followed by multiple-angle tasks

III.12 Sources should encourage critical thinking and reflection

III.13 Functionality of the textbook

IV. Quantitative analysis

IV.a Space analysis

IV.a.1 how much space is given to a country, region, etc.?

IV.a.2 how much space is given to each historic area: politics, economics, society, culture, religion, mentality, daily life, gender, etc.

IV.a.3 how much space is given to a specific subject?

IV.a.4 how much space is given for the history of neighboring nations and ethnic minorities in comparison with the history of the majority

IV.b Frequency analysis

IV.b.1 frequency of familiar and unknown words

IV.b.2 frequency of names, dates, statistical data, terms

IV.b.3 frequency of academic, difficult, long words, abbreviations

IV.b.4 how often does the text mention other nations, peoples, ethnicities, etc.

V. Qualitative analysis

V.1 Content relevant and adequate to democratic realities and values

V.2 Nature of dominant discourse (informative, normative, impersonal)
V.3 Form of narration (statement of facts in relation to explanations, opinions, comments, interpretations, theories, etc.)
V.4 Factual accuracy (exclusion of errors, stereotypes, etc.)
V.5 Comparative, multicultural and multiple-angles approaches
V.6 Problematic approach
V.7 How is the history of neighboring nations and ethnic minorities presented: positively, neutrally, or negatively in the given thematic context (political, military, economic, cultural, religious)?
V.8 Relationship between world culture, national culture, local and ethnic minorities cultures
V.9 The link to the topics studied in previous grade and suggestions for following grade
V.10 The link to other school areas of study (interdisciplinarity)

VI. Linguistic comprehensibility of the textbook
VI.1 Corresponds to the age of students/level of schooling
VI.2 The logical structure of topics and transitions from one topic to the next
VI.3 Coherence of ideas and their argumentation (logical, clear, grounded, relevant to the subject matter)
VI.4 Content motivation (captivating, emotional, interesting, diverse, personal)
VI.5 Textual cohesion: accuracy in expressing ideas, number of ideas in one unit, transition to a new idea, form of narration (active/passive or positive/negative)
VI.6 Sentence structure (simple presentation, short, specific, definition of terms)
VI.7 Length of sentences (number of words, characters, known/unknown words, etc.) and their complexity
VI.8 Grammar, style, syntax, vocabulary
VI.9 Terminology. Frequency of academic, difficult, long words, abbreviations
VI.10 Meaning of terms (positive, negative, or neutral)

VII. Technical quality
VII.1 Format, size (size and total number of pages)
VII.2 Quality of cover (paperback, hard cover, laminated, number of colors, pictures) and its durability
VII.3 Quality of textbook’s paper, number of colors used inside
VII.4 Layout of information: density, number of columns, typeface, letter size
VII.5 Text/picture ratio: number of pictures per page, per subject, per topic, etc.
VII.6 Quality of pictures: size, location (up, down, left, right)
VII.7 Durability of textbook
VIII. Textbook illustration/content/meaning/effectiveness(esthetics)
   VIII.1 Compatibility of pictures and text
   VIII.2 Picture diversity: maps, photographs, portraits, documents, drawings, tables, charts
   VIII.3 Typology of pictures: real and abstract
   VIII.4 Meaning of pictures: distance of image and number of people/objects depicted
   VIII.5 Captions: present/absent, succinct/complex

IX. Learning analysis of textbook
   IX.1 Explicit learning objectives (in introduction, preface)
   IX.2 Planning learning units (linear, ramificated)
   IX.3 Diversity and clear wording of tasks/activities
   IX.4 Flexibility of teaching methods from the point of view of interactive approach
   IX.5 Open nature of tasks (based on personal experience of child/group)
   IX.6 Problem situations and case studies (observation, research, analysis, etc. exercises)
   IX.7 Developing skills, creativity, critical and analytical thinking (comparative analysis, problem situations)
   IX.8 Feasibility of tasks
   IX.9 How specific, practical and measurable the teaching tasks are
   IX.10 Complexity of evaluation degrees (should be different)
   IX.11 Encouraging individual work
   IX.12 Presence of self-evaluation opportunities
   IX.13 Bibliographical suggestions

Bibliography:
A handbook (1949): A handbook for the improvement of textbooks and teaching materials as aids to international understanding, UNESCO, Paris.
workshop held in Braunschweig (Germany) 11-14 September 1990, Council of Europe, Strasbourg, 52-59.


P. Weinbrenner, P. (1990): Methodologies of textbook analysis used to date. In: H. Bourdillon, (ed.), History and social studies: methodologies of textbook analysis, report of the educational research workshop held in Braunschweig (Germany) 11-14 September 1990, Council of Europe, Strasbourg, 21-34.


Cum sa analizezi manualele. Posibilități de abordare și consecințele lor în analiza manualelor școlare (rezumat)

Învățământul presupune, în primul rând, promovarea cunoștințelor și educarea valorilor morale, atitudinii față de anumite evenimente, procese, popoare și țări. În majoritatea țărilor democrație din lume instituțiile de stat stabilesc politica educațională și valorile sistemului educațional. Manualele școlare au o influență considerabilă în educarea cetățenilor în formare, deoarece au menirea să susțină realizarea politicii educaționale. Deseori voluntar și/sau involuntary, manualele școlare sunt influențate de anumite dimensiuni și ideologii ale societății, care vin din contextul politic, moral, economic, social, cultural etc., obiectivul de bază rămânând însă acela de a promova mesajul educativ.

Astăzi educația poate fi realizată prin intermediul mai multor căi: orală (discuții, dezbateri), imagini (tablouri, hărți, diagrame etc.), lucrări științifice, povestiri, legende, surse narrative, eseuri, teatru, muzeu, TV, ziare, cinema, internet, etc. Marea majoritate a acestora le regăsim în manualul școlar, care combină componentele textual, ilustrativ, grafic, surse și oferă un șir de sugestii pentru folosirea metodelor complementare de înșușiare a unui obiect. Studiată în această diversitate de conținut apare problema calității lor, care poate fi apreciată pe mai multe căi.

În secolele XIX-XX manualul școlar a devenit un instrument de propagandă a statului în promovarea valorilor caracterește regimurilor de guvernare: rasial,
naționalist, socialist, etc. Manualele din perioada războiului rece au fost și ele puternic influențate de confruntările ideologice dintre cele două mari blocuri politico-militare. Astfel a apărut necesitatea de a stopa promovarea urii față de altul și de a încuraja susținerea păcii și bunei înțelegeri între popoarele lumii, indiferent de rasă, etnie, religie, cultură și limbă.

Practica internațională acumulată pe parcursul secolului XX ne demonstrează actualitatea și importanța unor studii analitice privind manualele școlare. Asemenea cercetări facilitează atât estimarea nivelului, calității și necesităților sistemelor educaționale, cât și excluderea eroirilor factologice, prejudecăților și stereotipurilor din conținuturile curriculare. UNESCO și Consiliul Europei îndeamnă statele lumii să încurajeze cooperarea în domeniul elaborării manualelor școlare ținând cont de realitățile contemporane, să asigure o abordare din perspective multiple și transparente a trecutului cultural, în baza cercetărilor științifice. Astfel inițiativa internațională de revizuire a manualelor a fost transformată într-o disciplină științifică numită cercetarea manualelor (Schulbuchforschung, Textbooks research/analysis).

Astăzi, manualul școlar este mai mult un mediu didactic decât o simpla carte. Totodată, manualul școlar continuă să fie un obiect al dezbaterilor politice și un subiect al costurilor educaționale publice. Elaborarea unui manual depinde de mai multe condiții și constrângerii de ordin material, tehnic, financiar și administrativ. În fine, manualul școlar este un proiect de investiții pentru editori și un instrument de control al instituțiilor statului asupra proceselor educaționale. În articol sunt prezentate succint diverse căi (testarea, chestionarea, expertiza, cercetarea), criterii (formale, conceptuale, structurale etc.) și metode de analiză (cantitative și calitative), care, per ansamblu, ne permit să apreciem complexitatea și diversitatea manualului școlar și să căutăm soluții și metode de îmbunătățire ale lor.