THE USE OF TEXTBOOKS IN THE TEACHING-LEARNING PROCESS

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Abstract The following paper presents the results of The Quality of Slovenian Textbooks (KaUč) project, the main objective of which is to develop textbook quality indicators for practical use in the validation and evaluation processes. The first part of the paper focuses on the definition of a textbook and its role in the process of education, since textbooks still represent the essential didactic tool in teaching school subjects. The empirical part of the paper explores the textbook use at different stages of curriculum implementation in the Slovenian primary and secondary schools. The results indicate that the primary school educators use textbooks in the revision and reinforcement stage, while the secondary school educators mostly use them in the stage of teaching the educational content. Thus, it is concluded that teachers consider secondary school students more mature than the younger students and assign them more comprehensive tasks.

Keywords: lesson stages, textbook quality, lesson, textbook, textbook use.

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The textbook is the main carrier of the curriculum and represents the dominant role in school subject teaching and learning (Sherman et al., 2016; Hadar, 2017).

It is the key schoolbook, used by students on a daily basis (Ivanuš Grmek, 2003; Mullis et al., 2012). Consequently, it is assigned the key role in the system of educational tools (Skela, 2008a).

However, the textbook is just one of the tools that help teachers achieve their educational goals. Teachers use teaching aids autonomously and plan individually when and how they will use them. In addition, teachers no longer have to follow the guidelines of one textbook, as several different textbooks are available for individual subjects. Teachers can choose the one that best suits both their teaching style and the specific characteristics of their students (Justin et al., 2003). Since the textbook is an important element of the teaching-learning process, the textbook politics must become part of the educational politics and receive more professional attention as well as a greater deal of systematic discussion (Turk Škraba, 2006).

Learning-oriented curricula does not only bring a great deal of autonomy for teachers, but it also enables various content and pedagogical approaches for the authors and the publishers. In addition, it positively effects the pluralisation of textbook supply (Kovač et al., 2005). Greater autonomy can encourage greater professional commitment, or it can, on the other hand, make teachers focus solely on the education and content solutions found in selected textbooks and other tools, such as workbooks, teaching aids, didactic instructions, worksheets, samples of teachers' lesson plans, and others. Publishers have been publishing professional teaching materials that include reliable and effective solutions for nearly every dilemma and dimension of the education process (Justin et al., 2003).

What is a Textbook?

Article 2 of the *Pravilnik o potrjevanju učbenikov* (2015) defined the textbook as the "basic teaching material to achieve the educational objectives and standards of knowledge defined in the curriculum and the catalogue of knowledge." According to these rules, school reader books are also classified as textbooks, as they are a collection of texts selected in accordance with the curriculum goals. Textbooks can either be printed or electronic (*Pravilnik o potrjevanju učbenikov*, 2015, Article 2).

Poljak (1983) considered the textbook as the basic teaching and learning material which enables students to acquire the necessary knowledge, develop critical, creative and dialectical thinking, and develop their mental skills, while Gak (2011) defined the textbook as one of the numerous sources that enables teachers to provide quality teaching. Kovač et al. characterized the textbook as "a textual teaching medium and part of educational tools that aids both, the efficiency of teaching as well as individual learning" (2005, p. 20). Ivanuš Grmek (2003) defined the textbook as a significant teaching-learning book, in which science and/or a certain discipline is transformed in a way that is accessible to all students.

Since it is intended for mass use, the principles of the majority must be considered in the creation of textbooks. Furthermore, the language should be adapted to learners' developmental stage and the content, range of problems and the level of complexity should comply with the particular developmental stage of average learners (Ivanuš Grmek, 2003).

Undeniably, the textbook is an important educational tool that mediates knowledge to new generations (Palló, 2006), and can be, according to Marentič Požarnik (1988), classified as one of the external factors of successful learning. It represents a particular kind of professional literature "defined by the content and target audience. On a broader scale, it is defined by the school system, since its content is 'determined' by the national curricula and the content and operational objectives of the subject or subject area" (Turk Škraba, 2006).

Accordingly, it can be concluded that textbooks have a great influence on the achievement of the curriculum goals (Hadar, 2017). According to Ersoy & Şahin (2012), textbooks continue to remain the educational material that is matched with the mandatory curriculum.

The textbook should enhance the teaching-learning process with the use of the didactic-methodological organisation of the content and the adapted visual and graphic material. Both the textbook content as well as its structure are designed for independent learning and acquiring various levels and types of knowledge. Its contents and structure depend on the school subject and the educational level (*Pravilnik o potrjevanju učbenikov*, 2015, Article 2).

Scientific content in the textbook is structured, transformed and simplified appropriately, as students have little prior knowledge of the content provided. Additionally, textbooks follow specific rules of the cognitive process wherein the content is didactically processed and hence understandable to students (Kovač et al., 2005). For this reason, the scientific content, logic, and terminology should be transmitted into textbooks by means of the so-called didactic transformations, which simplify, shorten and select the presented content. The didactic transformation occurs on three levels: the level of goals, the level of the scientific system and the level of the teaching content (Strmčnik, 1997, 2001). The didactic transformation is an extremely challenging process, since it must produce a functional and coherent textbook for its users (Turk Škraba, 2005). The divergences in textbooks are subject to different understanding of curricula designed on the basis of both specific pedagogical purpose as well as cultural and educational tradition (van den Ham & Heinze, 2018).

"In practice, we occasionally (still) encounter erroneous definitions. Some teachers, as well as students and their parents believe the textbook has the role and definition of the curriculum and often mistake the textbook for the curriculum" (Turk Škraba, 2006, p. 31). Hence, the textbook contents in educational practice are often strictly followed (Hadar, 2017). However, despite all its advantages and quality, a textbook can only assist teachers in achieving a certain standard of knowledge determined by the curricula or catalogues of knowledge and should only be one of the sources of knowledge, but under no circumstances a collection of the entire content of the subject (Turk Škraba, 2005).

In addition to textbooks, teachers also use other educational tools in accordance with the aim to achieve educational goals determined by the curriculum. Štefanc (2005) defined these additional aids as the material that is either specifically designed for the use in the classroom or individually chosen by the teachers for the purpose of teaching.

Characteristics of a Quality Textbook

The guiding principles of each school are quality, teaching quality, and the quality of knowledge, which undoubtedly depends on the quality of educational resources that aid both, teachers in the teaching process as well as students in the learning process (Cigler, 1997); textbooks, as educational resources, represent part of the complex

system of education processes (Turk Škraba, 2005). A good textbook is the students' most important source of knowledge, since it helps them acquire knowledge and contributes to their personal development (Cigler, 1997). One of the key roles of a good textbook is also to encourage students to acquire knowledge independently (Turk Škraba, 2005). Due to ongoing changes in the world, one of the problems of textbooks is that they quickly become outdated and should be written in a way that they can be used for several years (Šmit, 2011).

According to Cigler (1997), a textbook's appearance should be attractive, especially its cover design, and its language should be appealing to the students. The textbook must also include students' expressive abilities and characteristics, while enriching their vocabulary (Zupanič, 2014). In addition, it should contain clear messages that motivate students to learn with comprehension, as opposed to learning texts they do not understand by heart. This can be achieved by providing clarity of the content, which is enhanced by images and illustrations. The content should provide basic facts, definitions and concepts. All illustrations, images and graphs should provide captions that direct students to the essence of their content (Cigler, 1997).

Turk Škraba (2005) evaluated textbook quality according to the following three perspectives: (1) From the perspective of the country, which is the provider of the education system and which legally defines the goals to be achieved by the participants in the education process; (2) from the perspective of the mediators, that is the teachers, who transfer the determined educational content to their students; (3) from the perspective of the users, that is the students, for whom the textbook is intended.

The official standards for the quality of teaching materials in Slovenia are defined in Article 3 of *Pravilnik o potrjevanju učbenikov* (2015). In accordance with these rules, a textbook can be approved if the following standards are met: (1) The textbook is consistent with the statutory goals of the educational system in the Republic of Slovenia; (2) if the goals, knowledge standards, and contents are in line with the current curriculum and the catalogue of knowledge; (3) if it is in line with the contemporary findings of the subject; (4) if it is appropriate from a methodological-didactic point of view; (5) if it adheres to the norms and criteria for school bag weight reduction, adopted by the National Education Institute Slovenia; (6) if it is suitable for the developmental stage and age of participants in the educational process, (7) if

it is linguistically correct and appropriate, designed aesthetically, and visually and technically appropriate.

Unless the above-mentioned criteria are met, the Expert Council of the Republic of Slovenia for General Education shall not approve the textbook. In addition, a quality textbook should also abide by didactic principles, as they represent the basic guidelines of teaching. According to Strmčnik (2001), didactic principles represent an important theoretical foundation for education. For this reason, they also play an important role in conveying the content of the textbook.

Kovač et al. (2005) claimed that the following factors and principles should be followed in the creation of a quality textbook: (1) When evaluating the textbook content quality, it is necessary to take into account the principle of clarity, real-life and logical correctness and the system and structure of teaching; (2) from the perspective of the attitude towards the student, it is crucial to consider the zone of proximal development, and the principles of individualization and education; (3) the principles of activity and difficulty should be followed in terms of student activity; (4) the principle of economics and rationality should be considered in terms of the teaching process organization.

Jurman (1999) agreed that the textbook should be designed as clearly as possible and that its author should use examples and illustrations from the real world, while Kramar (2009) pointed out that learning is more successful, if the teaching material is clearly structured and systematic. By all means, a good textbook should be adapted to the students' developmental stage, as their physical and mental abilities differ. It is also important that students learn gradually. The textbook's level of difficulty should be adapted to the average student intelligence. However, below- and above-average talented students should be given adapted additional assignments (Jurman, 1999).

In accordance with didactic principles, Kovač et al. (2005) are convinced that a quality textbook's content and design encompass all guiding principles for quality textbooks. A quality contemporary textbook cannot merely be a "mechanical" didactic transformation of scientific content. It should also encourage active learning, a thorough understanding of teaching material, the interconnection of multiple subjects (Turk Škraba, 2006), students' willingness to learn and be creative,

and enable them the opportunity for individualisation. The textbook should encourage students to cooperate and contribute to the development of language and values, such as criticism, democracy, tolerance and gender equality (Cigler, 1997).

Skela (2008b) claimed that a good textbook awakens students' curiosity, interest and attention and should not make them feel uneasy. It should help them build self-confidence and motivate them to learn. Educational content in the textbook should be relevant and useful. Above all, the textbook should accommodate students' different learning styles.

The Role of the Textbook in the Teaching-Learning Process

The textbook is one of the essential educational tools in the teaching-learning process (Kovač et al., 2005) and is intended for the use of both the students and the teachers (Remillard, 2005). The research conducted by Herlinda (2014) showed that teachers consider textbook the basic tool in the teaching process. It functions as a teaching or learning tool, providing learning activities for students (Gak, 2011; Štefanc, 2005). Furthermore, it functions both as an informative as well as a formative tool, as it provides knowledge and simultaneously enables the development of competence, skills and values (Kukanja-Gabrijelčič, 2015). In the process of teaching, textbook functions on both, didactical as well as educational level (Jurman, 1999).

It is a crucial learning tool (Hung Lau et al., 2018) as it provides learning resources and contents that should motivate students to learn. Additionally, it is important as a tool for independent learning and reinforcing the learned content (Kovač et al., 2005).

The textbook is subject to social control mechanisms, since it represents a source of knowledge that is officially recognized as suitable and objective. The open market for textbooks and a wide range of textbook supply suggest the democratizing of the school space and underline the importance of developing professional criteria for determining the quality of textbooks (Kovač et al., 2005). A quality textbook often represents the basis for a quality lesson, as found by Hadar (2017) in her research analysis dealing with the interaction between textbooks and teachers. The author found that (mathematics) teachers frequently strictly follow textbooks when

delivering educational content. It is also important to note that teachers using various textbooks implement different didactic strategies. Moreover, textbooks influence the selection of teaching material. Ham & Heinze (2018) found that topics not included in textbooks are rarely discussed in class, as teachers mostly use them as a guiding instructional tool (Hung Lau et al., 2018).

Learning from a textbook can only be efficient if it is adapted for students and vice versa, as this is the only way students are able to learn how to use effective learning strategies. Authors can adapt textbooks to match the students' needs if they consider both the students' developmental stage as well as the level of comprehension. Textbooks are written in short comprehensive sentences and in simple and plain language, devoid of unnecessary foreign words. They have a good topical structure, using titles and subtitles, which makes navigation through text simpler. Including various tasks, questions, summaries and glossaries of new concepts, the textbook improves students' reading comprehension and greater cognitive abilities (Marentič Požarnik, 2019). Hence, Cigler (1997) claimed that the choice of textbook does not only depend on its quality but also on several other factors, one of the most important being the teachers' willingness to adapt their style of work to the style of teaching offered or demanded by the textbook. Another important factor is the students' ability to recognize the quality of the textbook.

In order to design a quality didactic textbook, authors should be well acquainted with contemporary didactics. They should be familiarized with the teaching-learning process structure and its principles. They should follow the teaching-learning activity principle and equip the textbook with a variety of activities. This allows students to construct knowledge through their own activity and learn the methods of learning (Poljak, 1983). Additionally, authors should consider the textbook's cover design, language, writing style, and artistic and graphic design (Ivanuš Grmek, 2003). Textbooks should be written in a way that assists students to learn the educational content and simultaneously complement and expand other sources of education. Teachers will be able to use the textbook effectively at all stages of the learning process, if the textbook is based on a proper didactic design (Poljak, 1983).

The role of the teacher is crucial in the initial stage of the teaching-learning process. Nevertheless, the function of the textbook should not be disregarded, since it is supposed to include the tasks, which students need to complete prior to learning new educational content. Textbooks adhering to this didactic criterion thus represent a source of information during students' preparatory work, which they can either do at home, or it can be integrated in the lesson by the teacher. The text including such tasks should be concise, since the introduction to new educational content is rather brief (Poljak, 1983).

The importance of the textbook becomes even greater when new educational content is discussed in the classroom. The objective of learning educational contents is to acquire knowledge. Therefore, this stage must be carefully and didactically designed. The content should be designed in a way that encourages students to learn and to complement and broaden teachers' instructions. Textbook authors should therefore follow the framework of desired knowledge and design it logically. They should highlight key points and present them in a logical sequence in the form of subheadings so that students can understand the basic topical content structure at a glance (Poljak, 1983).

As a secondary source, the textbook cannot replace the objective reality, however, the latter can be presented in several ways (original text, sketches, diagrams, and so forth). Furthermore, it should be presented clearly and unambiguously. In addition to the inclusion of facts, generalizations are also important. Students can understand them only through verbal explanation and clarification, which the author should include in the textbook in order to allow students different ways of generalizing. Another important aspect, relevant to didactic adequacy of the textbook, is considering both students' developmental stage and the balance between facts and generalizations. Teachers play an important role in this aspect, as they should be well acquainted with the textbook content and match their teaching style with that content by not merely listing textbook facts and thus increasing students' awareness (Poljak, 1983).

Practice (exercises) and reviewing the educational content are additional components of the teaching-learning process. The textbook should include additional work and exercises, which helps students practice tasks they should master. In order to ensure the sustainability of knowledge, textbooks should be

designed in a way that allows students to revise their knowledge. Authors can indicate the importance of certain parts of the text by using various types of font and print. Additionally, reviewing can be indicated by forming generalization, summaries, graphics, and so forth (Poljak, 1983).

Students should have the possibility to self-determine the level of acquired knowledge within each lesson. Textbook authors can enable student self-assessment by providing self-assessment exercises. Students can evaluate their knowledge by answering questions and doing exercises that indicate whether they have acquired the operational level of knowledge or whether they have learnt the content merely to reproduce knowledge (Poljak, 1983).

To sum up the theoretical part of the study, we defined the textbook as a teaching tool and highlighted the characteristics of a quality textbook and its role in the teaching-learning process.

In the following part of the study, we present the results of the empirical research of textbook use in the classroom, obtained by the Quality of Slovenian Textbooks project (KaUč).

Empirical Research

The Purpose of the Empirical Research

Results presented are part of an extensive research carried out by KaUč), the purpose of which is to develop textbook quality indicators for practical use in the validation and evaluation processes.

The research deals with textbook use in the teaching process in the Slovenian primary and secondary schools. Our study presents results related to textbook use in the classroom, the use of different types of textbooks, and the use of other teaching materials.

In order to clarify the terminology dealing with the Slovenian education system in the following study, we present a brief explanation of the Slovenian basic and secondary education system.

Slovenian basic education lasts nine years. Students enter primary school at the age of 6 and complete it at the age of 15. The primary school education is divided into three education periods, each covering three grades. First education period includes grades 1, 2, and 3. During this period, all subjects are taught by one teacher, hereafter referred to as the elementary teacher. The second education period of primary school includes grades 4, 5, and 6. Subjects are taught by one teacher in the fourth and fifth grades, but in the sixth grade, subjects are taught by individual teachers, hereafter referred to as subject teachers. The third education period includes grades 7, 8, and 9, and subjects are taught by subject teachers. After basic education, students can choose to enter secondary school, which lasts three to four years, depending on the type of school, but generally, children attend secondary school from the age of 15 to 18.

We were given textbook use data for individual subjects by the primary school elementary teachers of the first and partly the second education periods, namely from the first to fifth grade of primary school, primary school subject teachers of the third education period, and secondary school teachers. We selected the textbook use research for those subjects, for which we received the most feedback, including the number of participating teachers and their answers.

The textbook use research of first period primary school teachers includes subjects such as Slovenian language, mathematics, social studies, environmental studies and engineering. The second period primary school teacher textbook use research mostly analyses mathematical and science textbooks for subject such as mathematics, natural science, and biology, and lastly, the secondary school teacher research mostly includes language and mathematical textbooks.

The Research Sample

The Research Sample of the Primary School Elementary Teachers

The survey includes 44 elementary teachers in the first and partly second education periods, teaching students from the first to fifth grade. 95.5 % of them are female. On average, the surveyed teachers are 43.8 years of age, with a minimum of 26 and a maximum of 59 years of age. Their average years of service amount to 20.6 years,

with a minimum of 1 year and a maximum of 38 years. In terms of work experience, this is quite a heterogeneous group of teachers.

61.4 % of the surveyed teachers completed the seventh level of education and 63.3 % of them teach in the first education period. 34.1 % come from the Gorizia region of Slovenia, 27.3 % from the Central Sava region, and 22.7 % from the Southeast Slovenia region.

The Research Sample of the Primary School Subject Teachers

The survey includes 41 primary school subject teachers. 90.2 % of them are female. On average, the surveyed teachers are 44.2 years of age, with a minimum of 27 and a maximum of 64 years of age. Their average years of service amount to 18.7 years, with a minimum of 3 years and a maximum of 38 years. In terms of work experience, this is quite a heterogeneous group of teachers as well.

56.1 % of the surveyed teachers completed the seventh level of education. 56.1 % of them teach both in the second and third education period, 39 % only in the third and 4.9 % only in the second period. 36.6 % come from the Gorizia region of Slovenia and 26.8 % from the Central Sava region.

The research sample of the secondary school teachers

The survey includes 66 secondary school teachers. 77.3 % of them are female. On average, the surveyed teachers are 45.3 years of age, with a minimum of 30 and a maximum of 65 years of age. Their average years of service amount to 18.9 years, with a minimum of 1 year and a maximum of 39 years. In terms of work experience, this group is quite heterogeneous as well.
72.7 % of the surveyed teachers completed the seventh level of education. 61.5 % of them teach in the secondary general education and 21.5 % teach in secondary technical and professional education. 60.6 % come from the Central Sava region of Slovenia and 39.4 % from the Gorizia region.

Data collecting and processing procedures

We collected the data with the help of an online questionnaire, consisting of sets of questions and sets of evaluating scales. The constructed questionnaire is validated by the up-to-date scientific knowledge and by the practitioner teacher review. The reliability of the questionnaire was ensured by precise, specific questions, clear instructions as well as with the use of probing questions. The objectivity of the questionnaire is based on the fact that the interviews were conducted via web (individually, without the presence of the researcher). Furthermore, it mostly includes closed ended questions which enables an objective answer processing. Considering the limited sample of respondents, we only used the methods of descriptive statistics (frequency distributions, basic descriptive statistics), since the conditions for generalization methods (inferential statistics) were not fulfilled.

Results and Discussion

The survey includes titles of all textbooks used by the surveyed teachers. Table 1 below lists textbooks that the surveyed elementary teachers use with their students for individual subjects in grades from 1 to 5.

Table 1: Textbooks used in subjects such as Slovenian, mathematics, social science, environmental science, natural science and technology in individual grades from 1 to 5.

SLOVENIAN LANGUAGE		
Grade		*f*
1.	*Ko pravljice oživijo* [When fairy-tales come to life], a textbook, published by Izolit	1
	Jaz pa berem 1 [I Can Read 1], a school reader, published by Rokus Klett	1
2.	*Na mavrico po pravljico* [Fairy-tale on a rainbow], a textbook for the 2nd grade, published by Izolit	1
	Na mavrico po pravljico [Fairy-tale on a rainbow], a school reader for the 2nd grade, published by Izolit	4
	Kdo bo z nami šel v gozdiček [Who wants to join us in the forest], a textbook for Slovenian literature in the 2nd grade, published by Mladinska knjiga	5
3.	*Moje branje -svet in sanje* [My reading -world and dreams], a school reader for the 3rd grade, published by Rokus Klett	1
	S slikanico se igram in učim [I play and learn with my picture book], a textbook for the 3rd grade, published by Mladinska knjiga	2

4.	*Berilo 4, Razširi roke* [School reader 4, open your arms], published by Mladinska knjiga	1
	Radovednih 5: Berilo 4 [The curious 5: School reader 5], a workbook, published by Rokus Klett	3
5.	*Radovednih 5* [The Curious 5], a school reader for the 5th grade, published by Rokus Klett	2
	Na krilih besed 5 [On the wings of words 5], a school reader for the 5th grade, published by Mladinska knjiga	1
	Znanka ali uganka 5 [Solution or a puzzle 5], a workbook, published by DZS	1
	Na krilih besed, Berilo 5 [On the wings of words 5], a school reader, published by Mladinska knjiga	2
MATHEMATICS		
Grade		*f*
1.	*Prva matematika* [First Mathematics], published by Mladinska knjiga	5
2	*Matematika 2* [Mathematics 2], published by Mladinska knjiga	2
3.	*Matematika 3* [Mathematics 3], published by Mladinska knjiga	2
4.	*Radovednih pet, matematika 4* [Curious Five, Mathematics 4], published by Rokus Klett	3
5.	*Radovednih pet: matematika 5* [Curious Five, Maths 5], published by Rokus Klett	1
	Svet matematičnih čudes 5 [The World of Mathematical Wonders], published by DZS	3
SOCIAL SCIENCE		
Grade		*f*
4.	*Družba in jaz 1,* učbenik za 4. razred [Society and I 1, 4th grade textbook], published by Modrijan	3
	Radovednih pet, družba 4, učbenik za 4. razred [Curious Five, Social Science 4, 4th grade textbook], published by Rokus Klett	4
5.	*Radovednih pet: Družba 5* [Curious Five: Social Science 5], published by Rokus Klett	3
	Družba in jaz 2, učbenik za družbo v 5. razredu [Society and I 2, 5th grade social science textbook], published by Modrijan	6
ENVIRONMENTAL SCIENCE		
Grade		*f*
1.	*Dotik okolja 1* [A Touch of the Environment 1], published by Mladinska knjiga	2
2.	*Okolje in jaz 2* [Environment and I 2], published by Modrijan	1
3.	*Spoznavanje okolja 3* [Discovering the Science of the Environment 3], published by Mladinska knjiga	1
NATURAL SCIENCE AND TECHNOLOGY		
Grade		*f*
4.	*Od mravlje do sonca 1*, učbenik za 4.razred [From an Ant to the Sun, 4th grade textbook], published by Modrijan	3
	Naravoslovje in tehnika 4 [Natural Sciences and Engineering 4], published by Mladinska knjiga	2

	Raziskujemo in gradimo 4 [We are Exploring and Building 4], published by Mladinska knjiga	1
5.	*Radovednih 5: naravoslovje in tehnika* 5 [The Curious 5: Natural Sciences and Engineering 5], published by Rokus Klett	4
	Raziskujemo, gradimo 5 [We are Exploring and Building 5], published by Mladinska knjiga	2

Most textbooks within the same class are used by the Slovenian language teachers. Social science and natural science and technology teachers mostly use two or three different textbooks, and environmental science and mathematics teachers use one textbook within the same class.

Table 2 below lists textbooks for individual subjects used by primary school subject teachers.

Table 2: Textbooks used for mathematics, natural sciences, biology, chemistry, physics, geography, history, Slovenian, English, and German languages, art, music, engineering and technology, and home economics.

E-učbenik [E-textbook], Rokus Klett	1
BIOLOGY	
Dotik življenja [The touch of life], Rokus Klett	3
Spoznavam živi svet [Discovering the living world], DZS	2
Spoznavam svoje telo [Discovering my body], DZS	1
Interaktivni učbenik [Interactive textbook]	1
Pipinova knjiga [Pipin's book]	1
CHEMISTRY	
Od molekule do makromolekule [From the molecule to the macromolecule]	2
Od atoma do molekule [From the atom to the molecule]	2
Interaktivni učbenik [Interactive Textbook]	1
Kemija danes [Chemistry today], DZS	1
PHYSICS	
Moja prva fizika 1, 2 [My first physics 1, 2], Modrijan	2
E-učbenik [E-textbook], National Education Institute	1
GEOGRAPHY	
Raziskujem stari svet 7; *Raziskujem novi svet 8* [Exploring the old world 7; Exploring the new world 8], Rokus Klett	2
Spoznavam Evropo in Azijo; *Spoznavam Afriko in Novi svet* [Discovering Europe and Asia; Discovering Africa and the New World], Modrijan	2
Moja prva geografija [My first geography], Modrijan	1
Raziskujem Slovenijo [Exploring Slovenia], Rokus Klett	1
HISTORY	
Raziskujem preteklost 8, 9 [Exploring history 8, 9], Rokus Klett	2

Stari in srednji vek [Old and Middle Ages], Modrijan	1
SLOVENIAN	
Slovenščina za vsak dan 7, 8 [Everyday Slovenian 7, 8], Rokus Klett	2
Slovenščina 8, 9 [Slovenian Language 8, 9, E-textbook]	2
Od glasov do knjižnih svetov [From sounds to literary worlds], Rokus Klett	2
Gradimo slovenski jezik [Building the Slovenian language], Rokus Klett	2
Berilo 7 [School reader 7], Mladinska knjiga	1
ENGLISH	
Project 2, 3 4, Oxford	5
Touchstone 6, 9	2
Explorers 1	1
Happy Street, Oxford	1
GERMAN	
Ich und Deutsch 2, 3 [Me and German 2, 3]	2
Wegweiser 1 [Guidepost 1]	1
Nemški jezik za 7. razred [German for 7th grade], Založba Obzorja	1
MUSIC	
Glasba danes in nekoč [Music today and in the past], Rokus Klett	3
ART	
Likovno izobraževanje 6, 7, 8, 9 [Art education 6, 7, 8, 9]	1
Likovno izražanje 6, 7, 8 [Artistic expression 6, 7, 8], Debora	1
ENGINEERING AND TECHNOLOGY	
Tehnika in tehnologija [Engineering and technology]	1
Tehnika [Engineering], DZS	1
Tehnika [Engineering, Izotech]	1
HOME ECONOMICS	
Gospodinjstvo 6 [Home economics 6], Rokus Klett	3

The results indicate that teachers tend to use one textbook in the classroom for subjects such as mathematics, natural sciences, English, music and home economics, while teachers teaching other subjects tend to use various, mostly conventional textbooks.

Table 3 below lists textbooks for individual subjects which are used by secondary school teachers.

Table 3: Textbooks for subjects such as Slovenian, English, German, Italian, Spanish, mathematics, biology, chemistry, physics, information technology, history, psychology, sociology, and philosophy.3

SLOVENIAN	***f***
Na pragu besedila 1-4, ROKUS KLETT [At the Text's Threshold 1-4, Rokus Klett]	10
Barve jezika 1, 2, ROKUS KLETT [Language Colours 1, 2, Rokos Klett]	4
Mlada obzorja 1,2,3 [Horizons of the youth 1, 2, 3], DZS	4
Berilo 1-4, Umetnost besede [School reader 1-4, Art of the written word], Mladinska knjiga	3
Branja 1-4 [Readings 1-4], DZS	3
Z besedo do besede 4 [From word to word 4], Mladinska knjiga	1
ENGLISH	
On screen, Express Publishing	10
Headway pre-intermediate, Oxford	1
Success, Intermediate, Longman	1
Flash on English for tourism, Eli Publishing	1
Flash on English for cooking, catering & reception, Eli Publishing	1
GERMAN	
Themen aktuell 1, 2, Hueber Verlag	4
Optimal A1, A2, B1, Langenscheidt	3
Studio d, Cornelsen Verlag	2
ITALIAN, SPANISH	
Nuovo Espresso 1, Alma edizioni	1
Spazio Italia 1,2,3; Loescher	1
Nuevo Ven, Edelsa	1
Pasaporte, Edelsa	1
MATHEMATICS	
Planum, Spatium, Tempus, Modrijan	12
Matematika 1, 2, 3 [Mathematics 1, 2, 3], DZS	4
Linea nova, Modrijan	3
Matematika za triletne poklicne šole [Mathematics for three-year vocational schools], DZS	1
Matematika 1 [Mathematics 1], DZS	1
BIOLOGY	
Biologija celice in genetika [Cell biology and genetics], DZS	2
Biologija celce in ekologija z varstvom okolja [Cell biology and ecology and environmental protection], DZS	1
Zgradba in delovanje organizmov [Structure and function of organisms], DZS	1
Evolucija in ekologija [Evolution and ecology], DZS	1
Biologija 1, 2, 3, 4 [Biology 1, 2, 3, 4], Mohorjeva družba	1
Biologija -Ekologija [Biology -ecology], DZS	1
Od celice do organizma [From cell to organism], TZS	1

CHEMISTRY	
Kemija, snov in spremembe [Chemistry, Matter and Changes], Jutro založništvo	5
Verige in obroči [Chains and loops], Modrijan	3
Kemijo razumem, kemijo znam [I understand chemistry, I know chemistry], Jutro založništvo	1
PHYSICS	
Fizika 1, 2, 3 [Physics 1, 2, 3], Mladinska knjiga	4
INFORMATION TECHNOLOGY	
Osnove informatike: učbenik za pouk informatike v 1. letniku gimnazij in srednjih šol [Information technology basics: Information science textbook for the first year of secondary school], DZS	1
Računalništvo in informatika 1 [Computer science and information technology 1], E-textbook for information technology in grammar high schools, several publishers: UP, FRI, FERI	1
Informatika: učbenik za srednje izobraževanje [Information technology: Textbook for secondary education, SAJI	1
HISTORY	
Zgodovina 1, 2, 3, 4 [History 1, 2, 3, 4], DZS	2
GEOGRAPHY	
Obča geografija [General geography], Modrijan	1
PSYCHOLOGY	
Psihologija za srednje šole [Psychology for secondary schools], DZS	1
SOCIOLOGY	
Uvod v sociologijo [Introduction to sociology], DZS	1
PHILOSOPHY	
Filozofija za gimnazije [Philosophy for Grammar Schools]	1
ART	
Umetnostna zgodovina [Art History]	1

The tendency of using secondary school textbooks by the same publisher is most noticeable for subjects such as Slovenian language, English language, mathematics, chemistry, physics, and history.

As seen below, teachers evaluated the frequency of other materials they use in addition to textbooks with a 5-point rating scale, with 1 being *never* and 5 being *always*. Table 4 below shows the use of other teaching materials by the primary school elementary teachers.

Table 4: Structural percentages (f %) of elementary teachers according to the use of additional teaching materials.

Teaching material	Slovenian *f* %	Mathematics *f* %	Social science *f* %	Environmental science *f* %	Natural science and technolog	Rank
Workbook	80.0	93.1	69.2	60.0	55.6	1
Printable worksheets	31.6	30.3	14.3	50.0	16.7	5
Publisher's websites	54.1	46.9	66.7	64.0	83.3	2
E-textbook	44.4	43.8	40.0	58.8	41.7	3
Teaching materials available on the internet	43.2	36.4	40.0	61.1	41.7	4

The ranking of educational tools for different subjects in Table 4 above indicates that the workbook is used the most often, followed by publishers' websites, e-textbooks, teaching materials available on the internet, and lastly, printable worksheets.

The results indicate that in addition to the conventional, printed educational tools, elementary teachers increasingly use various electronic tools. The latter are more commonly used for subjects such as environmental science, natural science and technology and social sciences, such as Slovenian language and mathematics.

Subject teachers also listed a list of educational tools they use in addition to textbooks. The results are shown in the Table 5.

Table 5: Structural percentages (f %) of primary school subject teachers according to the use of other teaching materials for mathematics and natural science, biology, and biology and physics.

Education materials	Mathematics and natural science *f* %	Biology *f* %	Biology and physics *f* %	Rank
Workbook	42.5	44.4	50.0	2
Photocopiable worksheets	27.5	11.1	10.0	5
Publisher's website	25.6	22.2	25.0	4
E-textbook	55.3	53.8	55.0	1
Teaching materials available on the internet	47.5	40.7	40.0	3

The ranking of educational tools for different subjects in Table 5 above indicates that primary school subject teachers most commonly use the e-textbook, followed by the workbook in second place, teaching materials available on the internet in third place, publisher's website in fourth place, and photocopiable worksheets in fifth place. The subject teachers more commonly use electronic materials, the most common being the e-textbook.

Table 6 below illustrates the use of other teaching tools by secondary school teachers.

Table 6: Structural percentages (f %) of secondary school teachers according to the use of other teaching materials for foreign (mostly English) and Slovenian language, foreign language (mostly German), and mathematics.

Education materials	Foreign (mostly English) and Slovenian language f %	Foreign language textbooks (mostly German) f %	Mathematics f %	Rank
Workbook	56.6	75.0	69.2	1
Photocopiable worksheets	37.8	50.0	50.0	3
Publisher's website	14.8	5.0	0.0	5
E-textbook	22.2	15.0	15.4	4
Teaching materials available on the internet	51.9	45.0	50.0	2

The ranking of educational tools for different subjects in Table 6 above indicates that secondary school teachers most commonly use the workbook, followed by teaching materials available on the internet in second place, photocopiable worksheets in third place, e-textbooks in fourth place, and publisher's website in fifth place. The secondary school teachers more commonly use conventional additional materials, such as workbooks and photocopiable worksheets, than electronic materials.

Teachers evaluated the textbook use of individual subjects with five-point scale questionnaires (from 1 -*completely disagree* to 5 -*completely agree*) according to sets of "lesson stages".

Attention was given to textbooks of all subjects taught by elementary teachers. However, the analysis includes only the subjects that were evaluated by more than 20 % of teachers. These are Slovenian language, mathematics, social studies, environmental studies, and natural science and technology.

Table 7: Structural percentages (f %) of primary school elementary teachers according to the textbook use characteristic evaluation (agree, completely agree) for individual subjects.

Characteristic sets	LESSON STAGES
	I use the textbook for introductory motivation.
Slovenian *f* %	34.5
Mathematics *f* %	19.0
Social studies *f* %	33.3
Environmental studies*f* %	20.0
Natural sciences and technology *f* %	35.7
	I use the textbook to teach the educational content.
Slovenian *f* %	58.6
Mathematics *f* %	52.4
Social studies *f* %	60.0
Environmental studies*f* %	60.0
Natural sciences and technology *f* %	57.1
	I use the textbook to review and reinforce the lessons presented in the classroom.
Slovenian *f* %	75.9
Mathematics *f* %	81.0
Social studies *f* %	80.0
Environmental studies*f* %	73.3
Natural sciences and technology *f* %	85.7

Characteristic sets	LESSON STAGES
	I use the textbook as a guide for testing and evaluating students' knowledge.
Slovenian *f* %	55.2
Mathematics *f* %	61.9
Social studies *f* %	60.0
Environmental studies*f* %	66.7
Natural sciences and technology *f* %	57.1

The collected data indicate that elementary teachers most frequently use textbooks to review and reinforce the lessons (from 73.3 % to 85.7 %), however, they use textbooks less frequently for both testing and evaluating students' knowledge (from 55.2 % to 66.7 %), as well as for teaching the educational content (from 52.4 % to 60.0 %). Elementary teachers use textbooks in the stage of introductory motivation least frequently (from 19.0 % to 35.7 %).

Table 8: Structural percentages (f %) of primary school subject teachers according to the textbook use characteristic evaluation (agree, completely agree) for mathematics and natural science, biology, biology and physics.

Characteristic sets	Mathematics and natural science f %	Biology f %	Biology and physics f %
LESSON STAGES			
I use the textbook for an introductory motivation.	33.3	39.3	35.0
I use the textbook to teach the educational content.	59.0	60.7	55.0
I use the textbook to review and reinforce the lessons presented in the classroom.	79.5	71.4	75.0
I use the textbook as a guide for testing and evaluating students' knowledge.	64.1	64.3	65.0

In accordance with the articulation of the lesson, the primary school subject teachers most frequently use textbooks in the stage of reviewing and reinforcing the lessons presented in the classroom (from 71.4 % to 79.5 %), followed by textbook use as a guide for testing and evaluating students' knowledge (from 64.1 % to 65.0 %) and the textbook use for teaching the educational content (from 55.0 % to 60.7 %).

They use textbooks on rare occasions in the stage of introductory motivation stage (from 33.3 % to 39.3 %).

Table 9: Structural percentages (f %) of secondary school teachers according to the textbook use characteristic evaluation (agree, completely agree) for foreign (mostly English) and Slovenian language, foreign language (mostly German), and mathematics

Characteristic sets	Foreign (mostly English) and Slovenian language *f* %	Foreign language (mostly German) *f* %	Mathematics *f* %
LESSON STAGES			
I use the textbook for introductory motivation.	36.4	38.1	35.7
I use the textbook to teach the educational content.	70.9	81.0	71.4
I use the textbook to review and reinforce the lessons presented in the classroom.	61.8	57.1	50.0
Characteristic sets	Foreign (mostly English) and Slovenian language *f* %	Foreign language (mostly German) *f* %	Mathematics *f* %
LESSON STAGES			
I use the textbook as a guide for testing and evaluating students' knowledge.	65.5	66.7	50.0

The results in Table 9 show that secondary school teachers mostly use textbooks in the stage of teaching the educational content (from 70.9 % to 81.0 %), followed by the stage of evaluating students' knowledge (from 50.0 % to 66.7 %).

Less frequently, they use textbooks in the stage of reviewing and reinforcing the lessons presented in the classroom (from 50.0 % to 61.8 %), and least frequently in the stage of introductory motivation (from 35.7 % to 38.1 %).

Conclusion

The textbook is a teaching tool that facilitates both effective teaching as well as independent learning. The teacher can integrate the textbook into all stages of the teaching process. Simultaneously, the textbook also serves as a tool for students' independent learning (Kovač et al., 2005).

By interviewing teachers, we explored the textbook use for individual subjects in the teaching stages. However, it should be emphasized that the results gained refer only to certain groups of textbooks, since the selection was conditioned by a research sample of teachers and their professional autonomy while using textbooks in the educational process.

Several different textbooks are available for individual subjects, which enables teachers to select the one that is most suitable for their teaching style, as well as their students' needs and characteristics. The results of our study indicate that in addition to textbooks, primary school elementary teachers and secondary teachers most frequently use workbooks, while primary subject teachers most frequently use e-textbooks. With our analysis, we discovered that the primary school elementary, as well as primary school subject teachers mostly use textbooks in the stage of reviewing and reinforcing the lessons presented in the classroom. They rely on textbooks in the stage of introductory motivation least frequently.

The textbook use practice is somewhat different with secondary school teachers. Their textbook use is dominant in the stage of teaching the educational content. Similarly to primary school teachers, they use textbooks for introductory motivation least frequently.

We must be aware of the fact that the textbook no longer represents a book that should strictly be followed by teachers and students, since it merely represents one of the tools with which teachers can achieve educational goals (Justin et al., 2003).

Secondary-school teachers more frequently integrate textbooks in the stage of teaching the educational content, which is fundamental, as this is when students acquire new knowledge (Tomić, 2003). We believe this is due to the fact that older students have more experience identifying essential information in a text (Justin et

al., 2003) and find it easier to follow teaching content explanations with the aid of the textbook. Secondary-school professors have confidence in their students and believe that by independent textbook use they will acquire the required knowledge and upgrade the teachers' teaching content. However, authors emphasize that the textbook should play a decisive role in the stage of teaching the educational content (Poljak, 1983) regardless of the level of schooling.

According to our observation, all teachers refer to textbooks in the stage of introductory motivation least frequently, which is understandable, considering the fact that in the initial lesson stage, the role of the teacher is essential (Poljak, 1983) and students must be motivated to learn from the teacher (Tomić, 2003). In order to promote textbook use in all lesson stages, proper textbook didactic design must be ensured (Poljak, 1983). The teachers should be professionally trained, as it is the professionally qualified teachers, mastering the content of their subjects, that can competently and sovereignly include the textbook in all lesson stages (Kovač et al., 2005 and Poljak, 1983).

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