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QR CODE: PROBLEMS AND PROSPECTS OF APPLICATION IN UKRAINIAN LANGUAGE TEXTBOOKS FOR GRADES 10-11

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QR Code: Problems and Prospects of Application in the Ukrainian Language Textbooks for Grades 10–11

The article outlines the problems and prospects of using QR codes in Ukrainian language textbooks for grades 10–11. The belief was expressed that the use of QR codes in modern Ukrainian language textbooks for grades 10–11 is caused by the contradictions between strict hygiene standards for educational books and the requirements of the current program and the purpose of the course; the urgent and systemic need to prepare students for external independent assessment in every lesson and the time and quantitative restrictions of the lesson as the main form of training; requests of the current society on a person with developed critical thinking, formed emotional intelligence, developed skills to carry out various types of textual activity, etc. and educational and cognitive needs of the students themselves. It is noted that the use of QR codes in the educational process will help to expand the information field in the lesson, ensure that the student enters the media space for a fairly short time, and allows the student to «fully enjoy the benefits of multimedia technologies» (A. Svistunov). According to the author, the purpose of using QR codes in Ukrainian language textbooks in grades 10–11 is to balance rationally the content of the textbook by encrypting reference information, control exercises, links to media resources, video hosting sites, etc., to facilitate and speed up access for high school students as much as possible to reference books, to diversify the types of homework, independent research activities. Summarizing the above, the author comes to the conclusion that the use of QR codes in modern Ukrainian language textbooks for grades 10–11 should be considered both a methodological necessity and a rational way to avoid the information overload of the educational publication.

Key words: QR code, Ukrainian language textbook, subject and key competencies, educational information.

The modern generation of school textbooks is significantly different from the previous one. And this is understandable, since the request for the content of the textbook is clearly correlated with the request of modern students, teachers and parents, the requirements of existing programs and the conditions of the competition

for textbook manuscripts. The authors are faced with a serious problem: they have to place within the clearly defined page limits that amount of information, the mastery, study and assimilation of which will not only prepare high school students for external independent assessment, but, in our opinion, the most important thing, to form the competencies necessary for future specialists for their successful adaptation in society. One way to solve this problem is to use information and communication technologies, in particular QR codes.

In our opinion, their usage in modern Ukrainian language textbooks for grades 10–11 is caused by contradictions between:

1) strict hygienic standards for educational books, which publishers must follow steadily, and the requirements of the current program and the aim of the course –«the formation of a competent speaker, nationally conscious, spiritually rich linguistic personality» [7];

2) systemic need to prepare students for external independent evaluation at every lesson and the time and quantitative restrictions of the lesson as the main form of training;

3) requests of the modern society for a person with developed critical thinking, formed by emotional intelligence, developed skills to carry out various types of textual activity, etc. and educational and cognitive needs of the students themselves.

According to the review of scientific works, in recent years the number of studies increases that examine the essential characteristics, functions, features of the use of QR codes in education (V. Buzko, P. Demchenko, Yu. Echkalo, R. Romanenko, N. Forostyan, S. Shapoval, etc.), in marketing (V. Balyk, T. Dubovik, M. Kolesnik, A. Legkii, etc.), in banking (A. Melnichenko, etc.) and others. Despite the branches are so different, these studies are united by the goal that is to find out the functions of QR codes, their role in spreading the information and enhancing the attention of consumers to goods and services, etc. Certain advantages and disadvantages of QR codes, modeled areas of use, proposed encryption methods, recommended services that are useful for encoding information attract attention.

At the same time, according to research studies, there are only a few works on the QR codes usage in school textbooks. For example, O. Svistunov quite accurately formulates the problem of introducing computer technologies into the educational process: «modern textbooks and multimedia teaching aids are developing as if they are in parallel arias, they meet uprelatively. ... in any case the student either works with the text of the textbook, or a multimedia resource. These types of activities were and remain separated from each other, which, in turn, reduces the efficiency of using digital technologies in education» [6, p. 146], and offers ways to solve it through the use of QR codes in the educational literature.

The arguments of O. Goroshkina showed in the article on the problems of textbooks are considered to be actual: «The possibilities of information and communication tools are much wider than that of a traditional textbook :on the Internet, a student can find out the information offered in alternative textbooks, reference books , articles» [4, p. 5]. Some of the theoretical material published on the Internet on special educational resources, the author suggests to submit in the textbook by means of QR-codes, suggesting a special graphic designation – an icon, instead, in the textbook to place more personally important for the students, to communicate socially important aimed at mastering students with specific hands-on experience. We agree with the contest from the main and additional texts of the textbook that it is advisable to encrypt.

At the same time, the considerations, views and suggestions of scientists do not give a clear answer to the question if the usage of QR codes in modern textbooks, in particular in the Ukrainian language textbook for grades 10–11, is a tribute to fashion, a methodological necessity, or a rational solution of information overload in educational materials. We try to answer this question in this study.

The purpose of the article is to identify the problems and prospects of using QR codes in Ukrainian language textbooks for grades 10–11.

An analysis of the publications of Ukrainian scientists made it possible to verify that most of them consider the QR code as a two-dimensional ordered graphic sign and at the same time are focused on the features of its practice in various

industries. In particular, V. Balyk, M. Kolesnik, determining the place of the QR code in integrated marketing communications, express the opinion that it «plays the role of visualizing a certain message / appeal and becomes a sign that informs about the hidden meaning» [1, p. 115]. V. Buzko and Yu. Echkalo are right to note that «services for creating and recognizing QR codes can help teachers in both classroom and extracurricular activities and assist to attract the students' attention and interests» [2, p. 114], to increase their motivation.

The QR codes using has a positive effect on the formation of one of the students' key competencies, that is information and digital competence, which «involves the confident and at the same time critical application of information and communication technologies (ICT) to create, search, process and exchange information at work, in public space and in private communication» [5, p. 11]. Note that in the lesson when working with text or completing a research task, the teacher should inform high school students about the history of matrix codes and how they appeared, the directions of their use in various industries, about information encryption methods and others.

Synthesizing the views expressed by scientists, we come to this conclusion. The use of QR codes in the educational process helps to expand the information field in the lesson, to let the student enter the media space for a fairly short period of time, and allows the student to «fully enjoy the benefits of multimedia technologies» (O. Svistunov). So, the Ukrainian language textbook for grades 10–11 with an encrypted QR code of information becomes modern and meets the educational and cognitive needs of modern education applicants.

Another problem: applicants for education, mastering the Ukrainian language according to the standard level, get different specialization, such as historical, mathematical, biological and chemical, economic, geographical, environmental, law, etc. Therefore, probably, QR codes can also be considered as one of the directions for implementing intersubjective integration, at the level of textual, and not only didactic material. Therefore, the purpose of using QR codes in Ukrainian language textbooks in grades 10–11 is to have a rational balance in the content of the textbook by

encrypting reference information, control exercises, links to media resources, video hosting sites, etc., to facilitate and accelerate the access of high school students to information reference publications, diversify the types of homework, independent research activities.

The opinion is valuable that «such a „visualization of a message” is usually placed in a specific context that allows its content to be foreseen. As the studies show, this way of presentation attracts better attention, and placed without context is just a visual display of an information message that may be interesting for consumers» [1, p. 115]. Therefore, extrapolating what has been expressed to our research, we come to the conclusion that the information encoded by the QR code should either refine or deepen or detail the information and educational material in the Ukrainian language that is placed in the paragraph. Predict the contents of the QR code, for example, to the topic «Basic types of dictionaries. Reference media resources» (grade 10): 1) annotations for various dictionaries; 2) links to the network dictionaries; 3) informative information about the history of Ukrainian lexicography; 4) difficult cases of word usage, etc. According to the practice of textbooks usage, the links to various educational and reference media resources, video hosting sites using a QR code causes students more approval than tasks like Read the information posted on the site (the site is indicated) and prepare It is clear that in this case, high school students have to manually dial the link if they are using a printed textbook, but scanning a QR code speed up the way to the specified site and, in particular, the processing of relevant information.

It is logical that each matrix code must be signed. And we consider this to be a must for using QR codes in Ukrainian language textbooks. To prove our opinion, we draw a parallel between the QR code and the advertising headline. They have a common goal «to attract the attention of a certain category of consumers (in our case, students) to the message and give them an orientation to the perception of standard information» [3, p. 155]. We recommend to use the following verbal actualizers: «Read – and make sure ...», «Get acquainted – and you can ...», «Watch – and the answer to the question ...», «Perform tests – and know your real level of

knowledge!», etc., in order to make high school students be focused on the encoded information and on the result of the educational and cognitive activity.

There is a natural question: what information should be encrypted with a QR code. A generalized list of recommendations formulated by scientists and philology teachers on the QR codes using is the following: training video, presentation, media resources links, flash animation, a list of reference books, tests, tasks for educational and research activities, tables and diagrams, basic rules of stresses and vocabulary usage, language analysis schemes, tasks for each stage of the project, etc. Taking into consideration the Ukrainian language study in high school, we recommend to expand that this list (see Table 1).

Table 1

Information that is advisable to encrypt with a QR code

Information	Results of activity
Texts for stylistic experiment	to compare the created text with the original text, which becomes a stimulus to formulate the conclusions about the stylistic feasibility of using language units of different levels
Texts to check the correctness of the exercise (translation, editing, spelling workshop)	allow students to independently check the correctness of the exercise
Texts for comparison analysis	several options can be submitted for comparable analysis according to the profile of the training; will not be limited to a certain amount of texts and their number
Specimens of individual speech genres	except the samples of genres new to high school students (a review of a person's site, a recommendation text, a request for arbitrary content, an advertising text, etc.), it's advisable to present genres that are already known, for example: an essay, a comparative description, an invitation, etc. We recommend to complete such examples with links to cloud resources
Comments on exercises and tasks	will give students the opportunity to deepen their knowledge of the Ukrainian language, to review those spelling and punctuation rules from which mistakes were made

Summarizing the above, we come to the conclusion that the use of QR codes in modern Ukrainian language textbooks for grades 10–11 should be considered both a methodological necessity and a rational way out of the situation of informational overload in the educational publication. Textbook authors need to be exacting to the content of the main and additional textbooks, the choice of educational, reference and illustrative material that can be encoded without violating the requirements of the current program, but optimizing work with educational publications. We do not pretend to be complete in our statements, but we invite you to an active discussion of the problem raised in the article.

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Попова Л. О.

QR-код: проблеми й перспективи застосування в підручниках української мови для 10-11 класів

У статті окреслено проблеми й перспективи застосування QR-кодів у підручниках української мови для 10–11 класів. Висловлено переконання, що застосування QR-кодів у сучасних шкільних підручниках української мови для 10-11 класів зумовлено суперечностями між суворими гігієнічними нормами щодо навчальних книжок і вимогами чинної програми й метою курсу; щоразовою й системною потребою підготовки учнів до зовнішнього незалежного оцінювання й часовими та кількісними обмеженнями основної форми навчання – уроку; запитами нинішнього соціуму на особистість із розвиненим критичним мисленням, сформованим емоційним інтелектом, виробленими вміннями здійснювати різні види текстової діяльності тощо й навчально-пізнавальними потребами самих учнів. Зазначено, що використання QR-кодів в освітньому процесі сприятиме розширенню інформаційного поля на уроці, забезпечуватиме входження учня за досить короткий термін у медіапростір, дасть змогу здобувачеві освіти «насолотися повною мірою перевагами мультимедійних технологій» (О. Свистунов). На думку авторки, мета застосування QR-кодів у підручниках української мови в 10–11 класах – раціонально врівноважити інформаційне наповнення навчальної книжки завдяки шифруванню довідкової інформації, контрольних вправ, покликань на медіаресурси, відеохостинги тощо, максимально полегшити й пришвидшити доступ старшокласників до інформаційно-довідкових видань, урізноманітнити

види домашніх завдань, самостійну дослідницьку діяльність. Узагальнюючи зазначене, авторка доходить висновку, що застосування QR-кодів у сучасних підручниках української мови для 10–11 класів варто вважати і методичною необхідністю, і раціональним виходом із ситуації інформаційного перенасичення навчального видання.

Ключові слова: QR-код, підручник української мови, предметна й ключові компетентності, навчальна інформація.

Попова Л. А.

QR-код: проблемы и перспективы применения в учебниках украинского языка для 10–11 классов

В статье обозначены проблемы и перспективы применения QR-кодов в учебниках украинского языка для 10–11 классов. Высказано убеждение, что применение QR-кодов в современных школьных учебниках украинского языка для 10–11 классов обусловлено противоречиями между строгими гигиеническими нормами для учебных книг и требованиями действующей программы и целью курса; целенаправленной системной необходимостью подготовки учащихся к внешнему независимому оцениванию и временными и количественными ограничениями основной формы обучения – урока; запросами нынешнего социума на личность с развитым критическим мышлением, сформировавшимся эмоциональным интеллектом, выработанными умениями осуществлять различные виды текстовой деятельности и т. д. и учебно-познавательными потребностями самих учащихся. Отмечено, что использование QR-кодов в образовательном процессе будет способствовать расширению информационного поля на уроке, обеспечивать вхождение учащегося за достаточно короткий срок в медиaprостранство, позволит соискателю образования «насладиться в полной мере преимуществами мультимедийных технологий» (А. Свистунов). По мнению автора, цель применения QR-кодов в учебниках украинского языка в 10–11 классах – рационально уравновесить информационное наполнение учебной книги благодаря шифрованию справочной информации, контрольных упражнений, ссылок на медиаресурсы, видеохостинги и т. п., максимально облегчить и ускорить доступ старшеклассников к информационно-справочным изданиям, разнообразить виды домашних заданий, самостоятельную исследовательскую деятельность. Обобщая сказанное, автор приходит к выводу, что применение QR-кодов в современных учебниках украинского языка для 10–11 классов следует считать и методической необходимостью, и рациональным выходом из ситуации информационного перенасыщения учебного издания.

Ключевые слова: QR-код, учебник украинского языка, предметная и ключевые компетентности, учебная информация.

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