

Effectiveness of Wiki Pages as ‘Live Educational Tools’ for History Learning

By Ioanna Constantin*

Objectives: The aim of this project was to investigate the effectiveness of wiki pages as learning tools for the subject of history. Even though history is a compulsory subject in general education, it is considered by the majority of Romanian pupils as too theoretical and of little educational value. **Method:** Twenty pupils (13 male, 7 female) attending the 7th grade were selected as the study group. The ICT-based history project lasted 30 days and was administered for two hours per week in a school in Bucharest. The project was entitled "The untold story of Romania in World War I", and was part of a learning unit on "Europe and World War I". It aimed at building a wiki as a learning archive to answer the question: "Is there any justification for casualties in armed conflicts?" The wiki was a website that fostered collaboration between the teacher and the pupils. All pupils created personal accounts and participated in collaborative learning, discussion, and the interpretation of historical digital resources. The site included the project plan, useful links to a variety of materials, electronic presentations on World War I, various evaluation grids, a reflective journal, and all the materials developed by the pupils throughout the project. **Results:** The pupils studied the following historical content: the beginning of WWI, Romanian front, maps of trenches, declaration of war, weapons used, Romanian prisoners of war and monuments for war heroes. In their work they made use of texts, photographs, letters, recent historical articles and posters that they uploaded or linked to the wiki. **Discussion:** The wiki-based project helped pupils gradually change their views towards the learning of history. Working on historical data in the virtual space provided a game-like atmosphere that aided the development of their own understanding on the topic. This research shows that pupils can change their perspective if they are challenged to historical thinking through involvement in a wiki project.

Introduction

Virtual Learning Spaces

Virtual learning spaces represent an excellent opportunity for schools to improve learning effectiveness and motivate pupils to study further a variety of subjects. Through use of information technology, virtual learning spaces have now the potential to strengthen new educational paradigms and to meet the needs and expectations of the current generation of pupils. Learning and the

*PhD Student, Faculty of Psychology and Educational Sciences, University of Bucharest, Romania.

space in which it occurs are of major importance in achieving key competences in any subject.

First, let us explore the meaning of the term "learning space" and its difference to the traditional term "classroom". Until recently, classrooms were the main locations where learning took place. Other spaces that were used for the same purpose were the library, the reading room or the thematic laboratories. Still, the classroom is considered the most important place where learning occurred (Oblinger & Oblinger, 2005). However, with the introduction of the internet increasingly more people use the web to access information such as news, applications, music, publications and it is all in digital format. Moreover, access to internet networks has been extended through the use of other devices besides traditional computers such as laptops, tablets, mobile phones and digital cameras. Also, laptop prices have decreased while their performance and functionality has increased.

The current generation of pupils has been raised in the era of technological advances and has grown up by making use of the computer and other digital devices that assume working with information technology. For these pupils, technology is essential to learning. Veen & Vrakking (2006) stated that pupils are sociable, team-oriented, are comfortable with multitasking, have a positive attitude toward their perspective and are eager to develop and/or change as they are encouraged by a huge number of IT resources. In addition, wireless internet networks enable synchronised interaction or real-time operation among participants in the same class or different classes. Video conferences make a specialist's or teacher's attendance possible, at any time, without their physical presence in the classroom. Discussions, notes, class events can be saved and preserved for further study. Pupils who work on a joint project can 'meet' in these forums outside school hours to access information. Using wireless networks and digital devices with long battery life can take learning out of the 'physical classroom'. Any place outside the classroom can be transformed into an informal learning space.

Teachers can also make the switch! As in an ordinary classroom, the teacher can plan the learning space, resources, learning activities with the support offered by new technologies within the virtual learning space. An important issue is the vocabulary teachers use to describe the tasks pupils must do in the learning space. This vocabulary should be an 'active vocabulary'. In addition, teachers must involve pupils as learning partners and allow them to become active participants in their own learning.

Principles of Virtual Learning Spaces

Learning spaces must be designed according to principles that enable pupils to work to their full potential. These principles must take into account: analysis, creative ability, critical thinking, debate, presentation and clarity. For example, pupils should be able to present various materials in the classroom. For this, they should have access to online applications and materials which directly support them in data analysis, text interpretation or any other media required for completion of the set assignment. Virtual forums for discussion

and critical debate, are keys to encouraging learning, but they will be of little help if pupils do not use the cyberspace (Oblinger & Oblinger, 2005).

Learning spaces must allow the use of a large variety of materials and provide easy access to all participants. Since the process of examination and debate leads to the discovery and construction of knowledge, it is important to equip the learning spaces with tools that can capture class debates to be used in further class discussion or study. Therefore, learning spaces must provide participants with interactive tools that facilitate exploration, probing and examination. These include a functional set of applications that can be installed on the computer and can control the monitors in the classroom, such as a set of interactive communication tools.

Learning should not cease when the teacher leaves the classroom as the end of a class should be considered as the beginning of another type of learning i.e. virtual learning. Schools should provide both actual and virtual learning spaces (outside the classroom) to encourage further learning. There should be access to classroom materials (mostly digital) for active and social learning to continue outside the formal classroom. For example, school hallways can be redesigned to allow pupils to form small groups and generate further discussion in between classes. Alternatively, schools should provide a well-integrated virtual environment as it can support collaboration within projects and sharing of resources between pupils.

Informal learning spaces outside the classroom offer opportunities that facilitate teaching and learning. These spaces are key areas in pupils' work as pupils spend more time outside the classroom than in the classroom. For example, pupils conduct research for their school projects through searching the internet, writing, analysing problems. Pupils construct reports in the library or develop ideas in school hallways or in the media lab and above all either in the dorm rooms or at home. Pupils are enthusiastic about using information technology to explore topics further and they tend to approach learning as task solving.

Wikis

Wikis are collaboration sites that can be set to be edited by any user or only certain users. There is the possibility to control user access and therefore the educational environment can be secure. The author of the site can monitor content development as they receive notifications every time new material is placed on the wiki website. The site contains secondary pages and categories of tools and resources (Noveanu & Vlădoiu, 2009).

Wikis are virtual communities that can be used to facilitate: a) active learning, b) focus on competences, c) student centered-curriculum and d) collaboration, co-operation and team work. Project work that is developed through virtual learning spaces is an effective method by which pupils and teachers work together, determine stages of the project, identify weaknesses and solve tasks. Therefore pupils have the opportunity to '*learn by doing*' through using different resources and also freedom of expression.

Even though history is a compulsory subject in general education, it is considered by the majority of Romanian pupils as too theoretical and of little educational value. As a result, pupils show limited interest in the subject. Considering the interest pupils show for information technology, it was hypothesised that the creation of a wiki based project on a historical topic might have a positive influence towards pupil attitudes for history. Therefore, the aim of this study was to assess the effectiveness of wiki pages in generating interest among pupils for history and facilitating their learning for the subject of history.

Method

Twenty pupils (13 male, 7 female) attending the 7th grade were selected as the study group. Pupils were invited to participate in a wiki-based history project. The project lasted 30 days and was administered for two hours per week in a school in Bucharest. The project was entitled "*The untold story of Romania during World War I*", and was part of a learning unit on "Europe and World War I". It aimed at building a wiki as a learning archive to answer the question: "*Is there any justification for casualties in armed conflicts?*" Details about the project can be found at <http://povesteanespusaaromaniei.wikispaces.com>

The wiki was a website that fostered collaboration between the teacher and the pupils. All pupils created personal accounts and participated in collaborative learning, discussion, and the interpretation of historical digital resources. The site included the project plan, useful links to a variety of materials, electronic presentations on World War I, various evaluation grids, a reflective journal, and all the materials developed by the pupils throughout the project.

Pupils were guided in their discovery of the answer to the project question by the following content questions:

- What were the reasons for the outbreak of World War I?
- What was the meaning of 'total war'?
- Who were the allies in the conflict?
- What were the major battles of World War I?
- What were the reasons for Romania's participation in World War I?
- What were the major battles that took place in Romania?
- What battle strategies were used?
- What were the consequences of World War I (human v material losses)?
- What was the reality of the battle front?
- What impact did the war propaganda have on the population?
- What do numerical reports state about casualties?

Table 1. Learning Activities and Specific Competences in the Official Curriculum

<i>Learning activity</i>	<i>Curriculum competence</i>
<ul style="list-style-type: none"> - Read excerpts from an original text. - Text discussion and comparison with traditional information about the outbreak of conflict. - Identify strategies that were used in conflict. 	Presentation of historical facts, using selected information from historical sources.
<ul style="list-style-type: none"> - Description of images, drawings, etc. which depict the conflict. - Make a list of the conflict features. - Draw a Venn diagram to describe the conflict / armed conflict. - Comparative analysis of two literary pieces on WWI presented in a table and showing nationalist atmosphere and the front reality. - Comment on a caricature poster of WWI. 	Use historical sources to support a viewpoint.
<ul style="list-style-type: none"> - Analyse features of the concept "total war" or connected to industrial and economic war, naval warfare, balance of power, diplomacy, propaganda. - Identify conflicting camps and participating countries by making use of maps. 	Use historical terms in various written and oral communication situations.
<ul style="list-style-type: none"> - Make a comparison chart: casualties - material losses. - Compare the 5 years of war, using the battles that took place. 	Present similarities and differences between aspects of the civilization on the basis of information from historical sources.
<ul style="list-style-type: none"> - Design a table with chronological landmarks of the great battles of WWI. - Draw a map of the three major events of Romania's participation in war: the battles of Marasti, Marasesti, Oituz using text from a historical magazine. 	Place historical facts in time and space by making use of historical sources.
<ul style="list-style-type: none"> - Make assumptions about the consequences of conflict, starting from WWI military cemeteries. 	Solve problems in a team by negotiating the identified solutions.
<ul style="list-style-type: none"> - Analyse newspaper pages on Romania's decision to enter the global conflict. 	Use information and communication technologies to locate appropriate resources to solve a problem.

The learning unit was aimed at pupils' discovery learning. Pupils were assisted to develop their own learning by investigating historical facts. The teacher and pupils worked together to build the wiki site. The wider topic was the situation of Europe in World War I, yet the focus of the site was Romania's participation in the war. The learning unit allowed discussion of known and less known topics such as the reality of the front, the situation of soldiers, the politicians' view as well as social issues presented through posters. The pupils were encouraged to use various resources such as maps, newspaper and journal articles, official documents, posters, pictures of events, literary excerpts, video clips and chronological axes. The pupils were invited to develop multiple documents through team work.

The project used a variety of methods and student-centered assessments that helped keep pupils focused on the project tasks and allowed them to monitor their own as well as the class's activity. The teacher posted all assignments on the wiki pages, monitored student progress, assessed individual work and teamwork, and provided immediate feedback on project development and the final product. Another

important aspect was the opportunity for the pupils to self-assess and reflect on their learning throughout the project. The learning activities were developed to allow active participation, choice from a wide selection of available resources and flexibility in the way the final presentation is made. Table 1 shows the learning activities and the corresponding curriculum competences that were met.

In order to monitor their assignments, pupils used the work progress report. This was offered by the teacher to support pupils in developing and finalising the assignments and to assist them in the meta-cognitive process as well as in the learning of project skills. At the same time, the grid supported the teacher with overseeing individual pupil involvement in task solving.

The key competencies for lifelong learning as stated in the Recommendation of the European Parliament were assessed in the project¹. These competencies are shown in Table 2.

Table 2. Project Assignments and European Text for Lifelong Learning Key Competences

<i>Project assignment</i>	<i>Key competence as stated in the European text²</i>
Essay titled "What was the true World War conflict - recent revelations of history"	Communication in the mother tongue - the ability to express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) and to interact linguistically in an appropriate and creative way in a full range of societal and cultural contexts)
Collection of newspaper articles and propaganda posters on World War I	Cultural awareness and expression - appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media (music, performing arts, literature and the visual arts).
Newspaper article: <i>World War I: real causes and excuses</i>	Social and civic competences. <i>Social competence</i> is the personal, interpersonal and intercultural forms of behaviour that equip individuals to participate in an effective and constructive way in social and working life. <i>Civic competence</i> is the knowledge of social and political concepts and structures (democracy, justice, equality, citizenship and civil rights).
Oral presentation1: "Conflict and great battles of World War I"; Oral presentation2: propaganda posters and cartoons describing the political situation in WW1	Digital competence - the confident and critical use of information society technology (IST) and thus basic skills in information and communication technology (ICT)
Poster: the stages of conflict: causes, stakeholders, map of conflict, consequences. Conceptual map covering key stages of Romania's participation in WW1	Learning to learn - the ability to pursue and organise one's own learning, either individually or in groups, in accordance with one's own needs, and awareness of methods and opportunities. Entrepreneurship – team project work

¹ Recommendation of the European Parliament and of the Council of 18 December 2006 on Key competences for lifelong learning (2006/962/ec)

The instruments used to assess the project effectiveness were: a focus group, an observation grid, a progress report of the project activity, and an evaluation questionnaire. All these documents are available at <http://poves.teanespusaaromaniei.wikispaces.com>

The focus-group aimed to capture the pupils' attitudes towards the history class, the learning methods that were used and their preferences of teaching methods to be used in the future. The usefulness of teamwork and participation in joint projects was also discussed.

Results

The evaluation questionnaire of the wiki-based project showed progress in the selected specific competences from the curriculum as well as in the key competencies for lifelong learning as stated in the Recommendation of the European Parliament¹. Pupils showed not only acquisition of historical knowledge and specific vocabulary, but also acquisition of social and civic competences, ICT and 'learning to learn' skills. The pupils' involvement in achieving the project assignments exercised their independent learning and teamwork.

In the evaluation questionnaire, 75% of pupils answered that they preferred to work in a team. It is important to note that pupils selected teamwork at the outset of the project. This highlights the importance of teamwork among pupils of this age group. Pupils also stated that they preferred teamwork over selecting individual members from their group to act as team leaders. Nearly two thirds of the pupils agreed that working within a virtual space to complete the set assignments facilitated their learning. The pupils' showed their overwhelming support for the wiki-based project and welcomed the opportunity to be involved in another similar project in the future. More than two fifths of the pupils would like to have similar tasks in other school subjects.

The focus group showed that pupils are open to new working methods. Especially, teamwork was regarded very highly among pupils. Pupils stated that the traditional way of teaching a history class i.e. announcement of the topic, presentation of key terms, content presentation of the theme itself, conclusions and home assignment is not motivating for them and does not offer an example of what it means to really know history.

Discussion and Conclusions

During the project the pupils did their best to complete the tasks within the set deadline. Pupils worked using the materials provided and also located their

¹Recommendation of the European Parliament and of the Council of 18 December 2006 on Key competences for lifelong learning (2006/962/ec)

own through internet research. Pupils explored studies or recent articles concerning the participation of Romania to WW 1, they developed interesting assignments and drew relevant conclusions.

The wiki site can be improved and updated and consequently the pupils decided to work again on the same topic during the following school year and collaborate with their younger peers who would be studying the topic while at 7th grade.

The wiki experience has clearly had a positive impact on the participants. This digital facility supports pupils in approaching history from a variety of perspectives and it acts to 'liven up' history learning. It is of great importance that pupils explore various sources and develop their understanding of such an important topic in history as WW1. The wiki-based project highlighted that this important part of history is not a mere sequence of events which needs to be learned in a linear way and in the same way. When it comes to the study of conflicts there is no such thing as a good party and a bad party, a winner and a loser.

It is crucial to use motivating methodology in history teaching so that pupils do explore multiple points of view and arrive themselves to multiple conclusions. Pupils need access to a variety of resources and contextualized historical materials. At the same time they need to use their imagination in order to interpret an event and to experiment with new ways of presenting a topic. When pupils are offered multiple options and challenges they can develop their historic thinking and they get involved in "history making". The wiki-based project is an excellent educational tool that motivates and enthuses pupils to learn.

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