



Bitstrips in school

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Abstract: *The aim of this paper is to present the characteristics and possible applications of the Bitstrips tool in curricular and extracurricular activities of primary school pupils. The tool allows you to work in a virtual class through individual and /or team work of students with the help of teachers. The product of this tool is a strip, which can represent the content of teaching units which are dealt with in elementary-school subjects. Specifically in this paper a lesson in mathematics designed for the needs of regular classes and Math Club "Kefalica". This paper also represents a display of works of pupils – members of the Club, presenting the theme "Rules of Conduct", which can be used to present this topic in the homeroom class.*

Keywords: *Bitstrips; curricular activities; extracurricular activities*

1. INTRODUCTION

We are faced with a reality in which mobile phones have become an integral part of life for children of different ages. We are also aware of the large scale of information-technology use by the young. On the other side, teaching is still largely based on traditional classroom practices and use of the board. Bitstrips is a tool which can be used by both teachers and students, inside the classroom or at home, working to a set framework. The tool can be effectively used to change the routine class dynamics or as motivation booster in the learning process.

1.1 Novelty of Bitstrips

Since 2014, the application can be shared in real time through social networks. It is currently popular with the young frequenting the Facebook, in imitation of a number of other novelties that managed to arouse general interest. It enables the user to produce an idealised virtual version of oneself which – given the form of an actual comic-strip episode – can be shared with friends on the Facebook profile. The application is easily downloaded free of charge from Google play [1].

2. BITSTRIPS

2.1. Description

Bitstrips is a software tool for creating comic strips. 'Bitstrips for schools' is an educational application, intended both for teachers and students [2]. "It is very simple and entertaining, while at the same time offering diverse opportunities, from illustrating characters and scenes from a novel, to creating one's own story, to presenting complex scientific theories", is a

comment supplied by Jugoslava Lulić, Serbian Language teacher in the secondary technical school '9th May' from Bačka Palanka, in an article published by the Microsoft *Partner in Learning* magazine. [3]

The software is free for the first 30 day's trial and it does not have to be installed, which offers considerable advantages for use in school. The monthly subscription for a teacher is USD 9.95, for a class of up to 40 students. More classes can be included at a charge of USD 4.95 for each additional class. Annual subscription for a school is USD 1.5 per student, provided that the school has a minimum of 200 pupils. The use of the tool is somewhat limited due to the fact that being available only in English and French, it has no Cyrillic Alphabet as one of the options.

2.2. Registration

It is necessary for the teacher first to register at the application portal and create a list of the virtual class, i.e. to make corresponding 'student entries. Each student will log in using the class code created by the teacher, with a possibility to change their 'avatar' – the way they are seen by others in the same class, i.e. they wish to present themselves to the others.

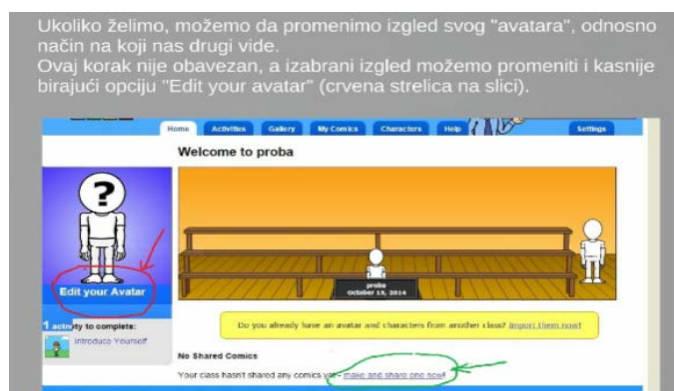


Figure 1. Instructions for pupils are posted on the website of the Math Club[4]

2.3. Production of comic strip

Production of a comic strip using Bitstrips is not at least complicated. It is necessary to adjust the following options: **Layout**, **Art Library**, **Text Bubbles**, **Controls** and **Filters**.

2.3.1. Layout

This option allows setting the number of squares or scenes (panels) which is required for the planned comic strip. Regardless of the shoed layout, the title of the comic strip must be entered into the **Title of Strip** filed. This can also be the title of a unit of the corresponding subject. The space to the right from the title is reserved for an optional entry of the comic strip author. The **Border** option in the top right corner can be used to change the colour of



Figure 2. Overview of Layout option

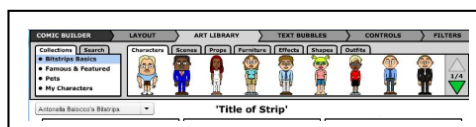


Figure 3. Art Library option

In the same way, options **Sky** or **Ground** can be used to change the colour of the scene. (Fig. 2.)

2.3.2. Art Library

Adding figures and/or objects is performed by dragging to the corresponding field. Using the green arrow (Fig. 3.), we choose the most suitable character from the gallery; alternatively, we it is possible to use a character created by the user themselves using the **My Characters** option.

2.3.3. Text Bubbles

The appearance of the text bubble is chosen depending on the type of communication (Fig. 4.) It is possible to use the corresponding font options as ell.

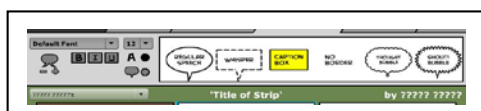


Figure 4. Text Bubbles option

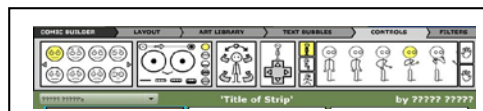


Figure 5. Appearance of Controls option on the screen

2.3.4. Controls

By using the Controls option, it is possible to change characters' face expression, to reflect a particular mood. This option also allows different body postures and movements (Fig. 5.).

2.3.5. Filters

This option is used to give an image a blurred or dimmed appearance.

2.4. Bitstrips used in curricular activities

The first comic strips dealing with contents of presenting certain Mathematical units were created within the 'Kefalica' Math Club. Some of these deal with a subject unit, whereas others focus on a relevant point, such as the one shown in the example (Fig. 6.). Pupils of years 7 and 8 produced comic strips in relation to many different topics, which at the time of making helped them to consolidate the learning input, as well as to prepare for the final examination. Some of these works are posted on the Club website [5]. The same works were later used by the teacher to present units in grade 5, as well as to familiarise pupils with the possibilities of using this tool. In the implementation stage, year five students worked in smaller groups according to their abilities and guided by clear instructions regarding the part of the unit to focus on, eventually producing their own comic strips. Bitstrips provides teachers with a possibility to assign mentor-guided homework, meaning that student's initial ideas can be revised by the teacher directly within the work produced by the student. It is also possible for other students to contribute suggestions and comments aimed at improving their peers' production.

One of the groups of pupils were insecure about their possibilities and knowledge, and decided not to publicise their strip in the previously created virtual class, together with works produced by other groups. Instead, they chose to e-mail their work to the teacher. There were many students who actually wanted to improve different aspects of their works, and they came up with several different comic strips dealing with the same topic. These works were

- processing the topic (collecting the data and – even more than this – recognising the relevant facts),
- choosing the way of how to present the facts (in a humorous or ‘scientific’ manner),
- choosing the setting for their plot,
- creating a dialogue,
- establishing and creating the character profile for their protagonists.

The time required for completing a comic strip depends on the student’s affinities, their freedom of expression and knowledge of facts. The process is made easier by the fact that this time is not limited to the frame posed by a school lesson. Knowing all this, the teacher ought to take care of the following:

- good organisation of the lesson,
- giving precise instructions regarding the work done from home,
- incentives for collaboration,
- assure his or her availability for any assistance the students may need.

Production of an educative comic strip teaches a student how to learn, developing their creativity and team work skills, together with tolerance, appreciation of opinions stated by others and critical thinking. This is an opportunity for a student to revise and widen their knowledge, learning how to summarise his or her own ideas. Students who read the comic strip created by either the teacher or their peers are given an opportunity to observe relevant facts presented in an interesting manner, supported by examples of practical use of the object of learning, thus stimulating the visual experience.

3. CONCLUSION

Parents used to limit the reading of comic strips for their children, believing that this medium has a limiting impact on the child's vocabulary. And they had a good reason for this, knowing that reading a book would be much more useful. However, in the present-day situation when children either have no time or enough interest for reading, this method of work actually helps to enrich their vocabulary. It is a challenging task trying to formulate adequate phrasing to present key concepts that must be presented within the limited area of the speech bubble, containing the gist of information for the reader. This is a process that demands a research into the limited number of appropriate options. Bitstrips is a simple tool conducive to creative learning, encouraging collaboration and communication. Learners can be set either independent or group assignments. As a safe tool which enables monitoring of the student’s progress, it can be used in the teaching process of any subject, as well as a means for facilitating a range of skills development in extra-curricular activities for students of different ages and abilities.

The Bitstrips blog [6] contains a number of comments and impressions by the users around the world. They are all highly positive, such as the following comments made by teachers:

- “I just wanted to let you know that my students love Bitstrips for Schools! What an awesome and safe teaching tool. My kids think that I am the greatest. Thanks so much for creating such an engaging website...”, Michele Zoccoli, Virgil Public School;
- “My students are addicted to this program. I could hardly keep them off it, and they were happy to have new assignments and complete them so they could share with the rest of the classes. Having a purpose in playing really kept them interested in what they were doing. Some of my most highly reluctant writers were among the first to accomplish the assignments I gave, and proved that they can write after all. With this program students don’t have to be limited by their drawing talent. And

the feature where we can upload and even search for our own images will mean that anything we can think up is possible!“, Shannon Powell, Central Montcalm Middle School;

- “I would say that this is one of the best educational applications of all times.” Royan Lee, Sixth Form Teacher, Charles Howitt Public School.

Here are some of the parents’ comments:

- “Phenomenal... Kids absolutely love it and I think this is an excellent tool helping the language development and medial literacy. The level of collaboration between the children is unreal. The fact that kids can share their cartoons and post comments and flags for inappropriate cartoons contributed by other students is really a wonderful thing...“, Ray Mirshahi, Timberbank Clicker Center Coordinator.

The application blog features a number of posts with comic strips created by users around the world, organised around different topics, which can be used in their entirety in developing and implementing a teaching plan, or as an example of how to create certain content.

RECOGNITIONS

The ‘Matiš’ mathematical fanzine produced by the pupils – members of the Math Club of the Tanasko Rajić elementary school won the first place at the 4th School Publishing Fair of the Moravički Region in the academic 2014/2015. [5]

REFERENCES

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- [2] Bitstrips, available at: <http://www.bitstripsforschools.com/>
- [3] Microsoft’s online teaching magazine ‘Partners in Learning’, available at: <https://pilcasopis.wordpress.com/>
- [4] Website of Math Club “Kefalica”: <http://ucionica17.weebly.com/korak-po-korak-do-stripa.html>
- [5] Website of Čačak Central Schools Administration: <http://www.skolskaupravacacak.rs/oblasti-rada/struno-usavravanje/1088-pobednici-cetvrtog-sajma-skolskog-izdavastva.html>
- [6] Blog application “ Bitstrips for School“: <https://blog.bitstripsforschools.com/>