THE CREATION OF VIDEO CONTENT FOR TEACHING AND LEARNING ABOUT STEAM

Vinicius Schramm Caldas[1] and Adan Sady de Medeiros Silva[2]
[1]*Dept. of Computation, Amazonas State University, Brazil*
[2]*Dept. of Meteorology, Amazonas State University, Brazil*

ABSTRACT

The work brings as a discussion the viability of technological advancement in the spheres of educational applications, validating the practices of using the creation of content in video format for teaching and learning the STEAM theme. Thus, the STEM academy, a project run by the Amazonas State University, aims to reach high school students using social networks as a teaching tool for this theme through videos that pique the interest of these young people. According to the restructuring moment experienced in the spheres of education not only in Brazil, but throughout the world, there is a need to search for a way to disseminate the m STEAM approach, such as creating videos for social networks, a communication tool widely used by young people. The results of this way of disseminating the STEAM theme have allowed for a better way of valuing the teacher as a whole, besides enabling the improvement of working conditions, along with teaching, and also the application of new teaching methods to teachers. In conclusion, it is understood that the insertion of new technologies enables the full development of the teaching-learning process, thus bringing possible improvements in education excellence and better working conditions.

KEYWORDS

Social Media, Videos, Learning, STEAM

1. INTRODUCTION

Education has changed over time, and so have some teaching models. Thus, there was a need for new configurations in the ways technologies were applied so that there would be less distance between the teacher and the student. The sudden change from face-to-face teaching to remote teaching can prove to be one of the most complex tasks for teachers and students. However, digital technologies can be used in educational activities as long as teachers are also open to new teaching models; and aware of the numerous possibilities offered by technological resources (MELO and MAIA, 2019). Thus, it is necessary that the applicability of digital technologies in the development of this learning process be increasingly interconnected with the teaching mode. This becomes challenging because most Brazilian schools and colleges face such a dilemma.

Nowadays, most people own cell phones, which enable them to access social media and become an allied tool for teaching. Such a tool can be applied in different approaches, including the STEAM (Science, Technology, Engineering, Arts and Math) approach.

So, in order to arouse the will of young people to know more about this approach, one has as a strategy the creation of content in video format for social networks, as a way to attract the viewer (high school students). Thinking about this approach, the STEM Academy (project developed by the Amazonas State University), through the Attraction Pillar (one of the pillars of the project that aims to reach high school students), uses the creation of video content to introduce these young people to the STEAM world, bringing content that is interactive, intriguing and fun, showing that the areas of technology and engineering are more accessible and interesting than one might imagine.

2. METHODOLOGY

The STEM Academy project has as one of its objectives to attract new students to courses involving the STEAM area (Science, Technology, Engineering, Arts and Mathematics). In this aspect, one of the strategies employed is the dissemination of the STEAM approach through social networks. As a mechanism to attract these young people is the creation of content in video format, being these, videos of curiosities, videos of reactions, and educational videos, mixing with everyday things, making fun the knowledge about the STEAM theme, showing more about the experiences of how the university life is, so that high school students feel lighter when they eventually enter this world.

To create these videos, first we search for content that involves the STEAM theme. After this search, the process of script assembly begins. This process is important because in it we can evaluate the best way to deliver the content with quality to the viewers. After the creation of the script, we move on to the video production and recording process. For the recording we use equipment such as: camera, microphone, lighting, software that helps capture the audio and create the scenery. After recording the video, the post-production process begins, which is the audiovisual editing. The last step is to post the video on the social network. All these steps can be observed in a flowchart shown in Figure 1.

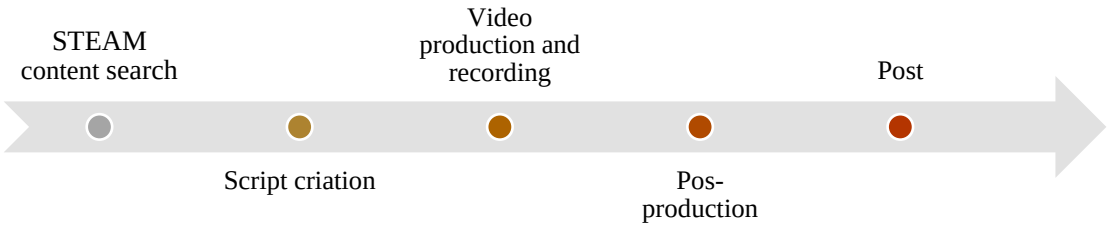

Figure 1. Flowchart of steps for video creation

3. RESULTS

Analyzing the last 6 months of video posts in one of the social networks of the STEM Academy Project (August/2022 to January/2023) 66 videos involving the STEAM theme were created (Figure 2a). From these posts it was possible to observe that the involvement of students with access to these themes has been extremely important for the continuity of the contents created in video, the feedbacks are always positive to those who didn't even have the basic knowledge of this area, thus encouraging them to experience this universe that is little talked about in the classroom. As an example, we can cite a post about a curiosity about the world's first train, reaching 15100 views (Figure 2b).

With the results obtained, it was possible to observe how this tool can help the dissemination of the STEAM theme reaching young audiences. It can also be observed how the technological tools for creating the videos helped to achieve the proposed goal.

Figure 2A. Social Network feed with the produced videos
2B. Comments on the videos indicating the identification of the content with young people

4. CONCLUSION

From this study it was possible to verify that the technological tools associated with the STEAM approach provide better knowledge retention and stimulus to individual learning, providing collective and teacher support in the preparation of classes, making them more attractive. Therefore, the STEM Academy Project included this tool as a teaching disclosure, thus reaching the target audience, the youth and teenagers. The videos meet this demand, helping in the implementation of STEAM in schools by providing students access to sources of information and promoting questions about the world we live in. At the same time, STEAM aims to promote a sense of curiosity. Videos also help in this aspect, as they are tools capable of turbocharging the methodology because, using engaging narratives, they help students identify new interests and become critical thinkers. and, in this way, all that is needed is access, understanding, and the proper application of the subject to which it needs to be addressed.

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