Empowering ICT skills of teachers in adult education in Serbia by using digital comics: a micro-credential approach

Ivan B. Šarčević
Independent Scholar, Serbia

ABSTRACT

This paper introduces adult education practitioners to micro-credentials that can be used in the teaching process. Teachers are already involved in online training essential for their professional development, and many of them are striving to increase their digital literacy. The use of comics in digital form can significantly improve the educational results of learners, and at the same time improve the ICT skills of teachers. Today's individualized approach to teacher training means that anyone can access online courses that interest them. The literature has confirmed the value of different forms of comics at all levels of formal education, where positive experiences in learning English stand out. Online learning platforms offer a variety of courses and video lessons in the field of digital comics, focusing on the benefits of using it in the teaching process. Smaller countries such as Serbia understand the importance of the development and application of digital technologies in education, so the number of courses for this segment of professional development is gradually increasing.

Keywords: *adult education; teacher; digital comic; micro-credential*

INTRODUCTION

Today, teachers are required to spend hours learning and developing digital skills to implement in their practice. Why not usefully spent training hours that boost motivation or creativity and improve the learning process? An exploratory study in Tanzania showed that micro-credentials in higher education institutions, as a relatively new learning concept in that country, can contribute to encouraging teachers and students to actively make decisions about their professional development (Ghasia, Machumu & DeSmet, 2019).

The offer of courses for making digital comics is increasing not only in the domain of artistic creativity and graphic credit courses (for example, Udemy platform), but now there is training available for learners that have no direct connection with making comics. Not only enthusiasts with plenty of free time, but also teachers who want to motivate their students can combine teaching content and useful web tools into one meaningful whole. The great value of applying ICT in adult education is an individualized approach to learning through access to various learning resources (Demirbilek, 2009). For the purpose of this paper, adult education refers to the learning process of persons over 15 years of age (Serbian example) who acquire qualifications for life and work through formal or non-formal means.

The objective of this paper is to encourage the use of micro-credential courses related to digital comics as a way of developing teachers' ICT skills in adult education.

LITERATURE REVIEW

Digital Comics and Education

There are several possible definitions of the term *digital comic.* From the perspective of the British Library, a collection of digital comics is a set of items with certain characteristics (Aggleton, 2019):

- The collection item must be published in a digital format.

- The collection item must contain a single-panel image or series of interdependent images.
- The collection item must have a semi-guided reading pathway.

Additionally, the collection item may contain:
- Visible frames.
- Iconic symbols such as word balloons.
- Handwritten style lettering which may use its visual form to communicate additional meaning.

Previous research has confirmed that using digital comics improves language skills, for example when learning English (Ghofur, 2022). Recent research on improving digital skills for learners and teachers in adult education highlight the value of digital comics as an example of the application of ICT in the teaching process, where well-known English-language sites such as *MakeBeliefsComix*, *StoryboardThat* or *Pixton* are already used (Šarčević 2023).

Micro-credentials in adult education

Micro-credential or *micro-credentialing* is a relatively new concept for many states, especially outside the Anglophone countries. This term usually describes short periods of learning (not regular courses) that, upon completion, provide certificates for the skill learned. Oliver (2019, p.18) noted that "… search of Google Scholar suggests the term first appeared in about 2013, often in connection with digital badges, and it has subsequently become synonymous with certificates earned through MOOCs".

The University of Maine System offers professional development opportunities that result in a verified micro-credential for those who want to update their skill-set. Their list of current micro-credentials includes *Adult Learning and Teaching* among many others. The great opportunities for professional development definitely point to the target group of users of micro-credentials, namely teachers. Not only is higher education suitable for the development and usage of micro-credentials, but it can also be applied at the level of primary and secondary education. One of the most important ideas was changing the way teachers are trained professionally (Greene 2019). Modern technology has brought about changes in the possibilities of learning in and out of the workplace.

Can micro-credentials actually help teachers improve their practice in schools? Educators often choose and decide for themselves which micro-credentials they need for further professional development (Hunt et al., 2020). Another author (DeMonte, 2017) added some examples of the benefits of micro-credentials for American states, such as online access to specific training, which favors many educators who want to learn and improve at a time that suits them (in the evening, during the weekend) or demonstrating adequate state support for teachers through understanding their educational needs.

DIGITAL COMICS ON LEARNING PLATFORMS

In addition to specialized sites (web applications) for creating electronic forms of comics for entertainment or teaching and learning needs, digital comics can be found in the offer of micro-credential courses (or training that have such features). These are standard micro-credentials like many others in the field of learning and education, such as IT courses. They can be found on some of the well-known educational platforms, such as *Udemy* or *LinkedIn Learning*.

Udemy is offering low-cost courses for both hand-drawn and digital comics (for example, *Let's make a One Page Auto Biographical Comic*). New technologies for making comics such as

Comics Maker AI and *ChatGPT* are also included. Those courses include training for various levels of learning, and the offer for inexperienced learners is solid. Many of them are in English, but other languages are available as well.

LinkedIn Learning explores possibilities for character design and comic book creation using applications such as *Adobe Fresco* or *Clip Studio Paint*. These affordable courses also have sharable certificates that are visible on personal LinkedIn profiles, and can also be printed as a PDF. The ability to connect earned certificates with personal accounts is of particular importance for establishing a network of practitioners and experts in the field of adult education with similar interests.

In addition to the previously mentioned platforms, the European project *EdComix*[1] is also worth mentioning. The goal of this project for language education is to develop teachers' ICT skills through the creation of inclusive (Specific Learning Disorders, cultural differences) digital comics. Emphasis is placed on their practical use in the classroom, as well as improving students' English language skills. Digital comic creation guides and lessons for teachers, sample workshops for students, and other content are available on the EdComix website.

Micro-credentials are still in the domain of educational policies for adult education, and some European countries are only encountering them for the first time (CEU 2022; EAEA 2023). What the existing policies and actors in adult education at the national level have in common is the desire to use existing technologies for economic development and improving the level of education of the population.

DIGITAL LITERACY: PROFESSIONAL DEVELOPMENT OF TEACHERS IN SERBIA

ICT has already found its role in the teaching process, and this is especially evident in the work of younger generations of teaching staff (Šarčević 2023). Using digital comics in teaching is not only a motivating activity for students of higher education institutions, it can also be applied at all levels of education and learning (see Figure 1).

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[1] More about comics creation resources available at: https://edcomix.eu/ (Accessed: 29 September, 2023)
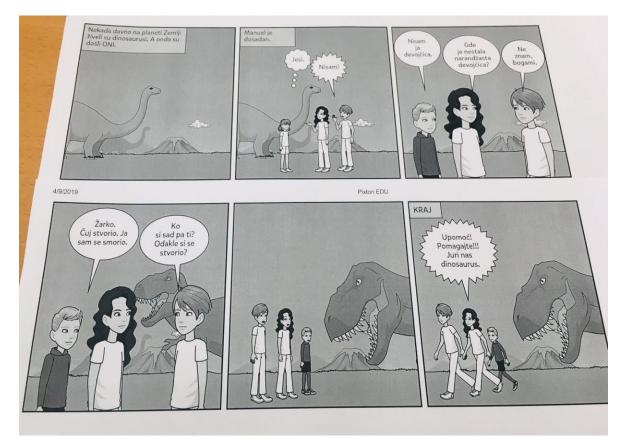
Figure 1: Printed version of a comic made in Pixton

Primary education of adults in Serbia takes the importance of education for digital technologies seriously, so that the subject *Digital Literacy* has become part of the compulsory curriculum for all learners over the age of 15. When it comes to the professional development of employees in schools, it can be said that primary training leads to the formation of competent teachers for learning in a digital environment. The number of online courses has increased in recent years, and their goal is to promote the use of educational platforms, web tools and applications.

Digital comics are the subject of certain courses of this type, but unfortunately, they are mentioned sporadically and often without an appropriate methodological basis. Most accredited courses cover generalized topics (for example, access to open educational resources or which software is suitable for creating presentations or animations). Only occasionally is training offered to create an educational comic using a web application such as Pixton (Institute for Contemporary Education, 2020).

CONCLUSION

Using digital comics in the learning process gives positive results. It encourages the development of teachers' digital competences, and enables students to be more motivated and improve their communication skills. Digital technology has enabled teachers to improve their knowledge and skills in the classroom or at home. In other words, easy access to educational platforms in an online environment offers courses according to personal interests. As an example, there are

specific courses for creating digital comics using well-known software applications, and more recently artificial intelligence.

Development of teachers' ICT skills, including creation of digital comics in adult education, should follow several steps:

- Observing the educational and developmental needs of employees in adult education.

- Creating a sustainable professional development plan that combines the needs of the modern educational process, as well as the needs of teachers.

- Search of existing educational resources and their upgrading, exchange of ideas with colleagues and other interested parties.

- Acknowledgment of previously used specialized websites/apps for acquiring teacher digital competences and their recognition as professional development training.

Micro-credentials in adult education are becoming an increasingly popular topic in countries that have not yet clearly defined their potential in education or economics. Judging by the current offer of certified courses, further development of micro-credentials is inevitable.

REFERENCES

Aggleton, J. (2019). Defining digital comics: a British Library perspectiv". *Journal of Graphic Novels and Comics*, vol. 10, no. 4, pp. 393–409. DOI: https://doi.org/10.1080/21504857.2018.1503189

CEU (2022). *Recommendation on a European approach to micro-credentials for lifelong learning and employability.*

Demirbilek, M. (2009). Exploring the status of ICT use in adult education: Perspectives from eight European countries - "reflections, insights, and challenges. *International Journal of Education and Development using Information and Communication Technology (IJEDICT),* vol. 5, no. 3, pp. 172-192.

DeMonte, J. (2017). Micro-credentials for Teachers What Three Early Adopter States Have Learned So Far. Washington, DC: American Institutes for Research. Retrieved from https://www.air.org/sites/default/fles/downloads/report/Micro-Creditials-for-Teachers-September-2017.pdf

EAEA (2023). *Adult learning and the green transition key results*. Retrieved September 24, 2023 from https://conference.eaea.org/wp-content/uploads/2023/06/Zagreb-annual-events-report-2023_compressed.pdf

Ghasia, M. A., Machumu, H. J., & DeSmet, E. (2019). Micro-credentials in higher education institutions: An exploratory study of its place in Tanzania. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, vol. 15, no. 1, pp. 219-230.

Ghofur, A. (2022). Digital Comic Media on Smartphones to Improve Communication Skills". *Journal of Innovation in Educational and Cultural Research*, vol. 3, no. 3, pp. 432-444.

Greene, P. (2019). Education micro-credentials 101: Why do we need badges?, Forbes, 16 February. Available at: https://www.forbes.com/sites/petergreene/2019/02/16/education-micro-credentials-101-why-do-we-need-badges/#6d39dfec2419 (Accessed: 25 September 2023).

Hunt, T., Carter, R., Zhang, L., & Yang, S. (2020). Micro-credentials: the potential of personalized professional development, *Development and Learning in Organizations*, vol. 34, no. 2, pp. 33-35. https://doi.org/10.1108/DLO-09-2019-0215

Institute for Contemporary Education (2020). *Pixton online training program: Learn a quick and easy way to create educational comic books*. Retrieved September 27, 2023 from https://www.institut.edu.rs/en/onlajn-obuka-pixton-naucite-kako-se-lako-i-jednostavno-izradjuje-edukativni-strip/

Oliver, B. (2019). *Making micro-credentials work for learners, employers and providers*, Deakin University. http://dteach.deakin.edu.au/2019/08/02/microcredentials/

Šarčević, I. B. (2023). The use of digital comics in formal education of adults. *Metodička teorija i praksa*, vol. 26, no. 1, pp. 23-31.

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