

THE USE OF PEDAGOGICAL SOFTWARE TOOLS FOR DEVELOPING FREELANCING SKILLS AMONG SCHOOL STUDENTS

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Abstract. *This paper examines contemporary approaches to developing freelancing skills among school students, with particular emphasis on the use of pedagogical software tools. In the context of the digital economy, fostering freelancing skills at an early stage has become an essential component of preparing students for future careers. The study analyzes the role of simulation-based learning environments (Simventure), artificial intelligence tools (Canva, Spline, and Kaiber), and online learning platforms in developing students' digital competencies. Furthermore, the paper synthesizes the experience of the "Free to Lance" project as an example of teaching freelancing skills in resource-constrained educational settings. The study also substantiates the pedagogical conditions necessary for developing students' adaptive competencies, including agency, adaptability, collaboration, and leadership.*

Keywords: *freelancing skills, pedagogical software tools, digital competence, simulation technologies, artificial intelligence, adaptive competencies, career guidance, school education.*

The rapid digital transformation of society has fundamentally reshaped the labor market, leading to the widespread expansion of remote employment and freelancing. Contemporary school students should be prepared not only for traditional occupations but also for flexible forms of employment that correspond to the demands of the digital economy. A notable paradox is that although many adolescents aspire to become influencers or freelancers, most of them lack the systematic knowledge and competencies required for successful participation in freelance work.

Pedagogical software tools serve as an important educational resource for developing students' freelancing competencies. These technologies facilitate not only the acquisition of technical skills but also the development of adaptive competencies that are essential for successful freelance careers. Therefore, the purpose of this study is to examine the

methodological foundations for using pedagogical software tools to foster freelancing skills among school students [1].

Freelancing skills consist of two principal components: **technical (digital) competencies** and **adaptive personal competencies**. Technical competencies include content creation, graphic design, data processing, web programming, and other profession-specific digital skills. Adaptive competencies encompass agency (the ability to act independently), adaptability and flexibility, collaboration, and leadership.

The experience of the **"Free to Lance"** project implemented in a school in Lalbagh, Bangladesh, demonstrates that students aged 12–14 show considerable interest in freelancing fields such as photography, content creation, graphic design, logo design, and data entry and are capable of mastering these competencies successfully. Within the project, ten talented students participated in specialized online training courses and subsequently taught digital skills to their peers through the **Human Library** initiative [2].

The following categories of pedagogical software tools have proven effective in developing freelancing skills.

Interactive simulations such as **Simventure** enable students to explore various career pathways from a first-person perspective. This software employs artificial intelligence-driven virtual characters to provide personalized guidance on post-school education and career planning. Developed according to the **ADDIE instructional design model** (Analysis, Design, Development, Implementation, and Evaluation), such learning environments effectively prepare students for real professional activities.

Research conducted in Chicago schools indicates that web-based artificial intelligence applications such as **Canva**, **Spline**, **Kaiber**, **Spatial**, and **Padlet** significantly enhance students' creativity and digital competence. In particular, teaching students **prompt engineering** enables them to use AI technologies more effectively. During the six-week program, students explored more than thirteen AI platforms and successfully developed their own creative capstone projects.

The **"Free to Lance"** project utilized the **10 Minute School** online learning platform, through which students completed specialized courses in graphic design, web programming, and data entry. One of the major advantages of the platform is that it enables students to learn independently and progress at their own pace.

The development of freelancing skills through pedagogical software tools should be organized as a sequential process consisting of the following stages [3].

Students are introduced to freelancing as a professional career pathway through meetings with successful freelancers and industry experts. Within the **"Free to Lance"** project, meetings with photographer **Nusrat Jahan**, who began her freelance career at the

age of seventeen, and **Shams Asif**, a representative of **10 Minute School**, significantly increased students' motivation.

Practical training sessions focusing on specific freelancing fields should be organized using pedagogical software tools. The selected software should be appropriate for students' age, cognitive development, and educational needs.

Specialized learning activities should focus on cultivating agency, adaptability, collaboration, and leadership. In the Chicago educational program, students first became familiar with these competencies, then assessed their individual strengths and areas for improvement before establishing personal learning goals.

Students should complete authentic or simulated freelance projects and compile their work into personal digital portfolios. The **Sandbox Showcase** event organized in Chicago, where students presented AI-based creative projects, provides an excellent example of this approach.

Students' achievements should be systematically evaluated, weaknesses identified, and future learning objectives established. The effectiveness of the **Simventure** simulation was assessed using the **System Usability Scale (SUS)** together with expert evaluation methods.

School-family-community collaboration also plays a crucial role in developing students' freelancing competencies. Within the "**Free to Lance**" project, discussions involving parents, teachers, and school administrators on topics such as *"Why Should Our Children Learn About Freelancing and Digital Platforms?"* significantly contributed to the project's success [2].

Similarly, the Chicago initiative demonstrated that collaboration among schools, **Apple's "Everyone Can Code + Create" program**, the **Illinois Institute of Technology**, the **Boys & Girls Clubs**, and the **One Summer Chicago** program substantially improved educational outcomes. Such partnership models highlight the importance of integrating institutional resources to enhance freelancing education [1].

The methodology for using pedagogical software tools to develop freelancing skills among school students is based on several fundamental principles.

First, developing freelancing skills requires a comprehensive approach that integrates both technical competencies and adaptive personal qualities.

Second, pedagogical software tools—including simulation-based learning environments, artificial intelligence applications, and online learning platforms—serve as highly effective instruments for preparing students for real-world professional activities.

Third, freelancing competencies should be developed progressively through sequential stages encompassing motivation, technical skill acquisition, adaptive competency development, project-based learning, and assessment.

Fourth, effective cooperation among schools, families, universities, and non-governmental organizations is a key factor in improving the quality of freelancing education.

In conclusion, the purposeful integration of pedagogical software tools into school education significantly enhances students' freelancing skills and contributes to their successful preparation for the demands of the future labor market [3].

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