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CMS WORDPRESS AS A TOOL FOR SHAPING THE DIGITAL SKILLS DEVELOPMENT OF BUSINESS STUDENTS

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Purpose: Investigate the possibility of using a tool CMS WordPress to develop the digital competences (in technological terms) of university students of economics.
Design/methodology/approach: A survey questionnaire (a total of 563 surveyed)/ explores the potential for practical e-business learning and the development of digital competencies, particularly in designing websites with integrated e-commerce functionalities.
Findings: Familiarity CMS WordPress is not difficult to master and allows the development of digital competencies/ CMS can successfully support the improvement of students' technical skills, even in business majors (not related to IT)/ literature highlights the inadequacies in expanding students' digital competences and underscores the need for increased attention to their development. The proposed model of program have been effectively implemented and validated/ it teaches problem-solving skills, effective communication and collaboration with real-world companies, information management, content creation, and sharing. In professional practice, these competencies translate into the ability to search for digital information, effectively present it on websites, and proficiently use CMS systems - integral elements of modern e-business operations.
Research limitations/implications: In the coming years systems (like Sigma or AI) may gradually replace the current popular CMS platforms. The author plans to continue researching, monitoring developments in technology and assessing their impact on digital competence acquisition. The author aims to contribute to the ongoing evolution of digital education and prepare students for the changing landscape of e-business.
Practical implications: Research has shown that it is worthwhile to teach digital competences as early as the university stage and to pay more attention to them because of the surrounding digital world. The research confirmed that the use of a popular tool (CMS) opens up opportunities to enter new professions, connects potential employees with employers. The impact of the article has a practical and economic dimension.
Social implications: changing approaches to competence formation in the information society, changes in approaches to university education.
Originality/value: The article shows the possibilities of using the CMS tool to develop digital competences. It provides a contribution to their development. It addresses universities and the wider business community.
Keywords: CMS WordPress, digital competences, Content Management System, university students.
Category of the paper: Research paper.

1. Introduction

The digitalization of the economy within the state significantly impacts the demand for specific skills in the job market, commonly referred to as digital competences. These competences are not only vital for navigating the information society but also essential for organizational leaders and decision-makers who must adapt their practices to thrive in the digital era (Berghaus, Back, 2016). As stated in (Gałan, 2022), digital competences have become one of the pivotal skills of the twenty-first century, gaining increasing importance across various educational domains amidst the ongoing digital revolution. Among the five core pillars of digital competence development—information processing, communication, security, problem-solving—content creation stands out. This pillar encompasses the development and integration of digital content, as well as the management of copyright, licensing, and software content (Vuorikari et al., 2016).

One approach to educating individuals in this domain involves teaching website creation, along with e-commerce integration, utilizing tools like Content Management Systems (CMS). For years, WordPress has stood out as the most widely used software globally for constructing websites and applications (Ciorici, 2024). Compared to other CMS - WordPress has already been the most used CMS in the world for many years (for comparison - WordPress used by 87.75 % of websites in category CMS, followed by Drupal - used by 4.95 % of websites in category CMS), which is why it was the system chosen for the classes (Stackcrawler, 2025). Additionally, literature highlights the application of CMS in production engineering, such as implementing an Open Source CMS system in product maintenance and service applications to facilitate information and knowledge management throughout operational processes (Wan et al., 2016).

However, there remain significant gaps in the development of digital competences among both students and educators. Many universities have yet to fully integrate these competences as fundamental skills, including proficiency in technology. Moreover, it's evident that new models for introducing digital competences are rapidly evolving, thereby exacerbating the existing digital divide. Available, free but highly developed tools such as CMS should therefore be used to support not only the learning process, but also the expansion of business, economic, social and many other skills.

The primary research question addressed in this article is: Is testing students' actual proficiency in specific WordPress functions, rather than just self-reported competence, a good way to concretely measure digital skills development?

The research hypothesis is that an innovative teaching approach using tools such as the CMS WordPress positively influences students' digital competences and can be one way to measure the level of these skills.

The subsequent section synthesizes the overarching findings drawn from the literature review, encapsulating previous experiences related to digital competence, e-business, and the utilization of CMS. Additionally, it examines students' attitudes and approaches towards learning these subjects. Following this, the subsequent sections delineate the objectives, methodology, and findings of the two empirical studies conducted. Finally, the paper concludes with overarching insights derived from the studies.

2. Literature review and reasons for choosing the course model

The author leveraged the resources of the Bydgoszcz University of Science and Technology Library, accessing a multi-search engine that scoured various bibliographic databases. These included Academic Search Ultimate, Business Source Ultimate, Springer Nature Journals, IEEE Xplore Digital Library, Social Sciences Citation Index, Scopus, and Directory of Open Access Journals. The search aimed to identify articles pertinent to the study's focus, employing search phrases such as 'digital competences' or 'digital skills' alongside 'students' or 'university,' as well as 'CMS' or 'content management system' or 'WordPress' in conjunction with "e-business course." The search was restricted to peer-reviewed scientific articles accessible in full within the academic fields of Economics, Business and Management, Information and Technology, as well as Social Sciences and Humanities. The ensuing section presents the most salient search outcomes, particularly those most aligned with the article's title and objectives.

2.1. Development and relevance of digital competence in student learning

In 2020, the European Commission noted that: ‘The current COVID-19 crisis has greatly accelerated the need for modernisation and digital transformation of education and training systems across Europe. The goal is to reinforce the ability of education and training institutions to provide high quality, inclusive digital education’ (European Commission, 2020). Digital competence, therefore, is a topic whose role has also been recognised in higher education, especially at a time when the COVID-19 pandemic has forced teachers and students to use ICT in the teaching and learning process (Gómez-Fernández, Mediavilla, 2021). While there are many definitions of the term, one of the most pertinent has been proposed by the European Commission as one of the eight key life skills and is defined as ‘the confident, critical and responsible use of digital technologies and a commitment to using them for learning, work and social participation’ (European Commission, 2019). It has also been noted that ‘digital competence seems to support research competence and may even support inclusion’ (Mieg et al., 2024).

Transforming higher education due to digitalization is a critical challenge to ensure adequate capabilities for a more entrepreneurial economy (Canal et al., 2024). In a survey conducted among Spanish university students (Esteve-Mon et al., 2020), it was found that the majority perceive themselves to possess a moderate to high level of digital competence, particularly emphasizing their proficiency in multimedia and communication aspects rather than the technical dimensions. This observation aligns with the findings of recurring research on digital competence issues, as highlighted by (Zhao et al., 2021). Researchers emphasize the importance for higher education institutions to prioritize the development of both students' and teachers' digital competences, advocating for the creation of relevant learning strategies and the utilization of appropriate tools to enhance the quality of education.

Conclusions drawn from various studies (Zhao et al., 2021) underscore the necessity of promoting the development of key competency areas for digital competence, including digital content creation, while also assisting students in acquiring knowledge to address everyday technological challenges. Furthermore, there is a clear demand for training initiatives focused on ICT usage and digital competencies.

Numerous studies from the last few years, e.g. (Martzoukou et al., 2020; Gazca et al., 2019; Dias-Trindade, Albuquerque 2022; Guillén-Gámez et al., 2023; Masias-Fernandez et al., 2023) indicate gaps in the development of students' and teachers' digital competence. It is noted that (González-Mujico, 2023, p. 15) "self-assessment tools have garnered significant attention in the interest of measuring the skillset required by educators and students to function productively and ethically in digitally mediated environments". The argument posits that higher education has yet to fully integrate digital competence as a fundamental skill, encompassing proficiency in technology. The rapid evolution of new models for introducing digital competencies risks widening the existing digital divide. To mitigate this trend, there's a pressing need to incorporate new methods and models into curricula that comprehensively develop digital competences, including the technical aspect. Furthermore, the literature suggests standardizing educational systems for teaching digital competences, which currently exhibit significant divergence (Morales et al., 2021). This article therefore emphasises technical competence within a specific tool - a content management system (CMS). Mastery of the CMS includes learning, use, implementation and operation - all integral elements of digital competence.

2.2. CMS as a tool to support the development of digital competence in the light of the literature

“Plenty of information and communication technologies are frequently employed in educational activities to improve the opportunities for students to gain knowledge and experience” (Vejačka, 2024, pp. 681-691). As content management systems are powerful, flexible and extensible - they have become the subject of much research in the last few years, and are even considered one of the most important information and communication technologies (ICTs) for managing an organisation's information and knowledge (Clair, 2012).

In particular, open-source CMS platforms like WordPress have attracted considerable research interest for their capabilities in managing knowledge and processes, particularly unstructured information and knowledge (Clair, 2012; Yen C.C. et al., 2008). Universities and colleges are increasingly adopting innovative curricula or courses that incorporate practical e-business learning facilitated by IT tools, with CMS playing a central role. Web Content Management (WCM), a specific type of CMS, is predominantly utilized for this purpose (Barker, 2016).

Notable research in this domain has been conducted in Croatia, where an e-business course was implemented at the Zagreb School of Economics and Management - Faculty of Higher Education Economics - between 2012 and 2015, with 20-25 students enrolled annually (Jerkovic et al., 2016). Similarly, in Poland, research has been conducted at Bydgoszcz University of Science and Technology (formerly UTP) between 2019 and 2024 (Krupcała, 2021; Krupcała, Kurek, 2020), from which it follows that digital competences need not, and should not, be a strictly IT domain, but should primarily concern future managers who, with the skills already acquired at university, will be better prepared for their work in the new, sought-after professions. According to this research, business students are keen to take on challenges such as building a CMS-based website, and their results are so good that those running organisations want to use their services and do. The students themselves also find such a course extremely useful in their field of study and provide them with opportunities that previously seemed unattainable to them due to their field of study or lack of familiarity with IT tools.

The reason for choosing the WordPress CMS is its universality - 810 million websites utilizing it, representing 43% of all websites on the internet. Moreover, WordPress commands a dominant 63,1% share of the CMS market, surpassing its closest competitor by more than tenfold. Notably, WooCommerce, an e-commerce platform built on WordPress, holds the distinction of being the most widely used e-commerce platform globally, boasting a market share of over 29% (Silkalns, 2024). Given these statistics, the selection of WordPress as the preferred CMS appears almost inevitable. Furthermore, the accessibility of CMS platforms like WordPress, which do not necessitate intricate programming skills or extensive IT expertise, presents significant opportunities for students from various academic backgrounds, including management.

The author has already conducted research for many years on the development of digital competences of university students through practical learning of website building and e-commerce based on CMS WordPress (Krupcała, 2021, 2023; Krupcała, Kurek, 2020).

The literature shows a disparity in attention towards studying the attitudes of economics students regarding the teaching of subjects like e-business and the associated applications used in these classes (Ahrens, Zaščerinska, 2014). While this aspect is not extensively explored, it is a recurring theme indirectly addressed in literature focused on CMS learning experiences (Jerkovic et al., 2016). However, some studies do delve into the general attitudes of students

towards learning e-business. For instance, Ahrens, Zaščerinska (2014) highlights that students' negative attitudes towards e-business applications hinder the enhancement of their knowledge and skills in this domain. Conversely, positive attitudes towards e-business applications contribute to enriching students' competence in e-business. Moreover, (Lichtenstein et al., 2015) presents intriguing findings indicating that students are tasked with creating new electronic businesses and developing prototypes of their electronic web fronts, reflecting a hands-on approach to learning. The authors also observe that "more than half of the students were enthusiastic about the new approach: they felt satisfied and even proud of their projects". This finding resonates with the research conducted by (Krupcała, 2021, 2023), which consistently indicates positive student attitudes towards building websites using the CMS WordPress. Moreover, these activities have been shown to enhance digital competences and uncover new job opportunities in fields that students had not previously considered, such as digital management or marketing and website management specialist roles, which are in demand in the labor market.

3. Research Methodology

The main objective of the empirical study was to investigate the possibility of using a tool such as CMS WordPress to develop the digital competences (in technological terms) of university students of economics (building a comprehensive website for an actual company operating in the market and an e-commerce site). The achievement of the main objective was to ensure the following specific objectives:

1) To learn about the possibilities of CMS as a tool for developing digital competences.
2) To learn about the validity of developing digital competences in economics faculties from the technological side, which could contribute to their enhancement.

Through this investigation, the article explores the potential for practical e-business learning and the development of digital competencies, particularly in designing websites with integrated e-commerce functionalities.

This study adopted a quantitative survey approach to gather evidence within the research domain, employing both digital and analog methodologies. The study's context draws from prior knowledge regarding the utilization of ICT tools in higher education (Gueldenzoph, 2006). Additionally, insights from an intriguing study reported by (Draganac el al., 2022) were considered. This study highlighted an average level of digital competence among students and identified disparities between self-reported digital competence levels and actual survey results, underscoring the necessity to enhance the educational process to elevate digital competence levels among students and secondary school students. Notably, programming emerged as the most deficient skill across all observed groups. Drawing from the literature review and practical

experience garnered during the initial project year, a survey questionnaire was developed. The questionnaire covered topics such as the skills acquired, the innovation of the programme, knowledge of the various elements of CMS WordPress, the future use of the knowledge acquired and the prospects of entering high-demand jobs in the labour market (Top 100 careers, 2024). More information about the questionnaire is included in Chapter 4. The survey was conducted among students of management and management and production engineering at the Faculty of Management at the Bydgoszcz University of Science and Technology (Poland), starting in the 2019/2020 academic year, and students of economics at the Merito (WSB) University (Poland), in the 2020/2021 academic year. A total of 563 students were surveyed – February 2020 – 94 students, June 2020 – 39 students (this was a sample of 100% of students - a very small yearbook size), February 2021 – 203 students, February 2022 – 70 students, February 2023 – 85 students, February 2024 – 72 students. There are no other digitization-related classes at these universities and their economics majors. The scope of the study therefore included all students of each academic year of the majors: Management and Production Management and Engineering (100%), participating in a project based on CMS WordPress. A limitation of the survey is that it was conducted at two business schools in Poland, which is a rather small study area.

4. Research Results

An earlier study (Lichtenstein et al., 2015) revealed that the Bydgoszcz University of Science and Technology stands out as the sole public university in Poland that emphasizes the development of specific technical facets of digital competence through instruction in building websites with e-commerce functionality using CMS WordPress. The course concept was formulated by the author in 2019, drawing upon her firsthand experience in the labor market, which highlighted the demand for individuals proficient in website and e-store operation. Additionally, the course design was informed by research examining existing e-business curricula at economic universities across Poland. The business acumen acquired by students during their studies serves as an advantageous foundation for effectively presenting content and products to target audiences. The concept is implemented through thematic labs conducted throughout the academic semester (on computers with online CMS access). Each student (men and women, full-time and part-time studies) is tasked with independently creating a comprehensive website that includes an online store, and each lab session introduces a new skill to enhance the site's functionality. At the onset of the course, the author demonstrates tasks such as creating and integrating a contact form into the site, after which students replicate the process on their own computers, customizing the form to suit the needs of a chosen company. In the academic year 2019/2020, students developed websites for hypothetical companies.

However, starting from 2020/2021, the focus shifted to creating websites for real organizations that applied to participate in the "Free Website" project at Bydgoszcz University of Science and Technology. Consequently, the class involves constructing a website from scratch for a participating company, encompassing components like a homepage, a slider, a contact form, a company blog with multiple posts, widget adjustments, and a complete e-store featuring services or products. Given the constraints of the publication size, only the responses to the three questions most relevant to the article's topic are included in the survey questionnaire, despite the questionnaire containing a total of 12 questions. Other questions included whether the respondents thought the skill would be useful in their future work, how much they enjoyed the classes (most vs. least), how much time they spent building the site and whether they were satisfied with the outcome and their involvement in the classes, and whether the occupations involved are in their opinion in demand on the job market.

First, students were asked about their familiarity with the various elements of the CMS system with which they created a comprehensive website and e-shop. It should be added that each element of the website was discussed very thoroughly and extensively, from the necessary plug-ins to, for example, building an e-commerce site, which was based on the woocommerce plug-in and included learning how to add simple products, complex products (with variants), setting up payment, shipping, taxes and a plug-in to enrich the order fields (such as an additional field for entering the VAT number). The results from each year are shown in Table 1.

Table 1.
Knowledge of the various WordPress elements (tools) and the ability to use them (1 - I know it and will use it; 2 - I know it, but I will not use it; 3 - I do not know it) (in percentage)

Tool/element of CMS WordPress	February 2020			June 2020			February 2021			February 2022			February 2023			February 2024		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Building the sites from scratch	84	14	2	90	10	0	88	11	1	94	6	0	90	9	1	79	15	6
Creating a contact form	84	16	0	85	15	0	87	13	0	96	4	0	95	5	0	88	11	1
Subscription to the newsletter (pop-up)	67	30	3	82	18	0	80	19	1	80	19	1	80	18	2	69	28	3
Building an on-line store	89	9	2	85	15	0	86	13	1	89	11	0	80	19	1	81	18	1
Building and editing menus	92	8	0	95	5	0	94	6	0	94	6	0	95	5	0	88	11	1
Creating links under the words in the text	81	16	2	90	10	0	85	14	1	94	6	0	91	9	0	83	14	3
Editing the shop's shipping settings	79	17	3	87	13	0	80	18	2	83	14	3	70	21	9	65	32	3

Cont. table 1.

Creating a slider	75	17	8	85	13	3	83	13	4	96	3	1	96	4	0	83	13	4
Sidebar modification (side panel)	43	40	16	85	13	3	63	29	8	70	24	6	73	20	7	57	32	1
Creating a blog and posts on it	63	29	8	92	5	3	80	16	4	93	7	0	95	5	0	86	13	1

Source: own research.

The results from Table 1 indicate that the most familiar elements of CMS WordPress that students know are: "building the sites from scratch". - can up to a total of 88% of all respondents, "creating a contact form" - can 89% of all those surveyed, "building and editing menus" - 93% of all students, "creating links under the words in the text". - 87% of all respondents. In two cases, there was no person who did not know and did not know how to perform "building and editing menus" and "creating a contact form". The biggest problems students have with "sidebar modification (side panel)". - 9% overall do not know and do not know how to modify it, 26% know but do not know how to edit it, and only 65% of respondents know and can edit the side panel. Overall, all CMS elements know and can do as much as 83% of the surveyed students, which is a very satisfactory result from the Author's point of view as a teacher.

Then students were asked whether classes of this type should be held at economic universities at all. The results from each year are presented in Table 2.

Table 2.
Opinions on the relevance of e-business classes for economics majors (in percentage)

Digital CMS classes should take place at economics faculties	**February 2020**	**June 2020**	**February 2021**	**February 2022**	**February 2023**	**February 2024**
Yes	78.5	87.2	77.3	94.2	87,1	87,5
No	6.5	7.7	9.9	2.9	4,7	5,6
I don’t know	15	5.1	12.8	2.9	8,2	6,9

Source: own research.

Familiarity with the tools and the ease of their use may have an impact on the very fact that, thanks to this, the vast majority of students believe that classes using CMS should be held at economic universities (a total of 467 people). 85% of respondents from all years of study who are studying business majors are convinced of the usefulness of CMS in their course of study.

The results presented in Table 3 demonstrate that the overwhelming majority of students either enjoyed or greatly enjoyed the classes, indicating a high level of satisfaction with the teaching approach and the skills acquired through it.

Table 3.
Students' perceptions of the e-business course (in percentage)

Did you like the class?	February 2020	June 2020	February 2021	February 2022	February 2023	February 2024
1. I did not like them at all	0	0	0	0	1,2	1,4
2. I rather did not like them	3.3	0	0.5	0	0	1,4
3. I liked them a bit	25.5	2.5	8.9	2.9	23,5	18,1
4. I liked them	38.2	15.4	33	22.8	29,4	37,5
5. I liked them a lot	33	82.1	57.6	74.3	45,9	41,7

Source: own research.

Importantly, there were virtually no respondents who expressed dissatisfaction with this mode of teaching or the skills they had gained through it (except for two people out of all respondents). This positive feedback is valuable as it enhances both the course content and the learning experience, making them more appealing to students. It underscores that the digitization of competencies and the acquisition of these skills through tools like CMS WordPress do not pose any challenges for students. As evidenced by the literature discussed earlier, job satisfaction plays a crucial role in the expansion of digital competencies and the motivation to further develop them.

Indeed, one of the key advantages of a CMS is its standardized structure across different platforms. Familiarity with one CMS, such as WordPress, provides a solid foundation for navigating other CMS platforms like Drupal or Joomla! This similarity in functionality means that students can leverage their knowledge of one system when required to work with a different CMS. Consequently, acquiring digital competencies not only enhances technical skills but also broadens the opportunities for their practical application.

Evidence of this can be seen in another survey that was conducted among course graduates in the 2022/2023 and 2024/2025 academic years. The questionnaire of the survey was completed by 84 graduates of the faculty who attended the academic year 2020/2021 (36 people) and 2021/2022 (14 people), academic year 2022/2023 (19 people), academic year 2023/2024 (14 people) and contained 12 questions. Below are the two most important from the point of view of this article.

Table 4.
Responses to the question of whether the skills/knowledge from web building have ever been applied

Successfully applied skills/knowledge from website building	Number of people (in percentage)
1. Yes	25
2. No	65
3. I don't know	10

Source: own research.

Table 4 shows that several people were able to use the knowledge gained in the classes in such a short period of time. These people (21 people) were also asked under what circumstances/situations this took place. The answers are as follows: "Internet sales; Privately, a front-end course; Helping a colleague, while at another university; While talking to friends,

at the university; I created a website for a company where a person close to me works; At a job interview at my current job, I'm supposed to run our company's website in the future; Designing my own website for academic purposes; Updating the current website; Noticing how other websites are badly done, such as not adjusted to be opened on a phone; At work; I've been to a training course on editing the website of the project where I work. It made it easier for me to understand how to edit that page; Working at a programming school - learning how to create pages; Working on a company website; Helping friends create a page for their business; An additional asset at a job interview; I got orders to make pages; In conversation with friends; When making a page for my own use; Studying and while using the site". As can be seen from the responses - many graduates found the course useful at work, while the classes interested the students so much that some of them decided to take other paid related courses, such as the front-end developer course.

Table 5.
Responses to the question of whether the student has already undertaken the construction of a website or dealt with professional website building themselves after completing the course

After the class was over, I undertook to build the site from scratch	Number of people (in percentage)
Yes, and I still do it today	1
Yes, but it is more of an occasional activity	15
Yes, but it came out poorly/not well	6
No	76
I don't remember	2

Source: own research.

In Table 5, it can be seen that 1 person undertook CMS-related work and is still working today. 12 people (15%) indicated that they had attempted to create a website, but not in a professional manner, but rather as an occasional activity. Considering the not too distant time since the topic was completed, the above results can be considered optimistic. Overall, about 22% of respondents have used their competencies formed during e-business classes and working with CMS.

5. Conclusion

Research over the past five years shows that familiarity with a tool like CMS WordPress is not difficult to master and allows the development of digital competencies, including the ability to build websites. The easiest way for students is to create and edit menus, create a contact form, and in general - to build sites from scratch.

Moreover, CMS can successfully support the improvement of students' technical skills, even in business majors (not strictly related to IT). Business students find the skills they have acquired very useful, and some of them (as shown in another part of the survey, which is not

presented in this article) are even considering their future work in the area of creating e-business solutions.

Recent literature highlights the inadequacies in expanding students' digital competences and underscores the need for increased attention to their development. The proposed model of e-business classes and the developed program have been effectively implemented and validated, as evidenced by the highly positive evaluation from students at Bydgoszcz University of Science and Technology. Students benefit from a high degree of autonomy in the course, which fosters motivation and facilitates a flow experience. The course not only imparts broad theoretical knowledge through lectures but also equips students with practical skills essential for effectively, correctly, and ethically performing tasks related to website construction and management. Furthermore, it teaches problem-solving skills, effective communication and collaboration with real-world companies, information management, content creation, and sharing. In professional practice, these competencies translate into the ability to search for digital information, effectively present it on websites, and proficiently use CMS systems - integral elements of modern e-business operations, as evidenced by surveys of graduates who, in such a short interval from classes, have already managed to apply the knowledge at work or even take up the topic professionally and earn money from it.

Recommendations for teachers or curriculum developers may be as follows: always assume that students' digital competencies are not highly developed (although logic might suggest that young people should be proficient with computers and internet use. However, this is not equal and does not translate to digital competencies). Therefore, popular IT tools that support the didactic process and develop skills in this area should be used for teaching. It should also not be assumed that topics related to digital competencies will be too difficult for students of non-IT-related fields. Having curricular blocks of classes, e.g., 30 teaching hours (laboratory) dedicated to what might seem like one topic, but which provides the future employee entering the job market with a comprehensive skill that they can utilize, understand deeply, and sustain themselves with. It is therefore worth cooperating with the business environment to meet the market's needs in developing digital competencies, activating not only students but also employers - companies with specific demands. And this demand for digital competencies, as evidenced by the current e-commerce market (which records an annual growth rate of about 10%) (The National Chamber of Commerce, 2024), is constantly increasing.

Indeed, the CMS-based application system continues to evolve rapidly and is expected to remain the basis for websites and web applications for the foreseeable future. However, the continued development of artificial intelligence and the trend to simplify technology for users is leading to the emergence of blockchain-based systems such as Figma (Figma, 2024). It is conceivable that these systems could gradually replace the current popular CMS platforms in the coming years, just as CMS replaced HTML-based websites in the past. AI is already being used in CMS for machine learning, natural language processing, computer vision, and knowledge graphs (Kandepu, Harry, 2023). Some blogs available on the internet even

suggest that it is a matter of time before CMS is completely replaced by AI (Tricension, 2024). This topic is much more extensive and could be the subject of a separate publication.

The author plans to continue researching this dynamic area, monitoring the development of technologies and assessing their impact on digital competence acquisition and educational approaches. By staying abreast of emerging trends and technological changes, the author aims to contribute to the ongoing evolution of digital education and prepare students for the changing landscape of web development and e-business.

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