


INSTRUCTORS' DIGITAL COMPETENCIES FOR INNOVATIVE LEARNING: HUMAN RESOURCE MANAGEMENT PERSPECTIVES

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 03 July 2023</p> <p>Accepted 02 October 2023</p>	<p>Purpose: This paper reviews related literature, including models and frameworks that focus on the skills of the digital instructor in the innovative learning environment. The study also tries to identify, key areas and missing factors, and thus locate digital skills and future avenues for education and satisfy the needs of digital-age learners.</p>
<p>Keywords:</p> <p>Human Resource Management; Instructors; Competencies; E-learning; Digital Skills.</p>	<p>Theoretical framework: Information technology will have a significant impact on education if operated properly by competent and capable instructors. The accelerated application and investment in technology have altered education, and instructors play a crucial role in the transition to 21st-century learning standards and methods. This is especially important because the future will be dominated by artificial intelligence (AI), advanced technology, and automation, which will require the next generation of employees to be tech-savvy. Therefore, this study will locate digital skills for instructors and provide recommendations and a road map that support both the advanced technological tools and the new innovative learning strategies in the context of human resource management.</p>
	<p>Design/Methodology/Approach: The researchers took a literature review as a method to determine the current situation, success factors of online learning, instructors' skills in the context of HRM. In addition, a qualitative analysis was conducted in the form of a focus group discussion, to spotlights on issues related to instructors needs to practice their roles in the e-learning environment.</p> <p>Findings: The results of this study have provided evidence that instructors' proficiency in IT "Digital Instructors" will transform teaching and learning to satisfy the 4th industrial revolution which is based on digital skills and contribute to the digital economy.</p> <p>Originality/Value: The results of this study are expected to be useful input for policymakers in education to be more courageous in making decisions when investing in IT resources and human resources "Instructors" in order to create superior and competitive teaching and learning environment. A framework is proposed in this study with consideration of HRM issues that will work effectively to enhance the role of digital education in society and contribute to the development of the educational process.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i10.3750</p>

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COMPETÊNCIAS DIGITAIS DOS INSTRUTORES PARA UMA APRENDIZAGEM INOVADORA: PERSPECTIVAS DA GESTÃO DE RECURSOS HUMANOS

RESUMO

Objetivo: Este artigo revisa a literatura relacionada, incluindo modelos e estruturas que enfocam as habilidades do instrutor digital no ambiente de aprendizagem inovador. O estudo também tenta identificar áreas-chave e fatores em falta e, assim, localizar competências digitais e caminhos futuros para a educação e satisfazer as necessidades dos alunos da era digital.

Enquadramento teórico: A tecnologia da informação terá um impacto significativo na educação se for utilizada adequadamente por instrutores competentes e capazes. A aplicação acelerada e o investimento em tecnologia alteraram a educação e os instrutores desempenham um papel crucial na transição para os padrões e métodos de aprendizagem do século XXI. Isto é especialmente importante porque o futuro será dominado pela inteligência artificial (IA), pela tecnologia avançada e pela automação, o que exigirá que a próxima geração de funcionários tenha conhecimentos tecnológicos. Portanto, este estudo irá localizar competências digitais para instrutores e fornecer recomendações e um roteiro que apoie tanto as ferramentas tecnológicas avançadas como as novas estratégias de aprendizagem inovadoras no contexto da gestão de recursos humanos.

Design/Methodologia/Abordagem: Os pesquisadores fizeram uma revisão da literatura como método para determinar a situação atual, os fatores de sucesso da aprendizagem on-line e as habilidades dos instrutores no contexto da GRH. Além disso, foi realizada uma análise qualitativa na forma de discussão em grupo focal, para destacar questões relacionadas às necessidades dos instrutores para praticar suas funções no ambiente de e-learning.

Constatações: Os resultados deste estudo forneceram evidências de que a proficiência dos instrutores em "Instrutores Digitais" de TI transformará o ensino e a aprendizagem para satisfazer a 4ª revolução industrial, que se baseia em competências digitais e contribuirá para a economia digital.

Originalidade/Valor: Espera-se que os resultados deste estudo sejam um contributo útil para que os decisores políticos na educação sejam mais corajosos na tomada de decisões ao investir em recursos de TI e recursos humanos "Instrutores", a fim de criar um ambiente de ensino e aprendizagem superior e competitivo. Neste estudo é proposta uma estrutura que leva em consideração as questões de GRH que funcionarão de forma eficaz para melhorar o papel da educação digital na sociedade e contribuir para o desenvolvimento do processo educacional.

Palavras-chave: Gestão de Recursos Humanos, Instrutores, Competências, E-learning, Habilidades Digitais.

COMPETENCIAS DIGITALES DE LOS DOCENTES PARA EL APRENDIZAJE INNOVADOR: PERSPECTIVAS DE LA GESTIÓN DE RECURSOS HUMANOS

RESUMEN

Propósito: Este artículo revisa la literatura relacionada, incluidos modelos y marcos que se centran en las habilidades del instructor digital en el entorno de aprendizaje innovador. El estudio también intenta identificar áreas clave y factores faltantes, y así localizar habilidades digitales y vías futuras para la educación y satisfacer las necesidades de los estudiantes de la era digital.

Marco teórico: La tecnología de la información tendrá un impacto significativo en la educación si la manejan adecuadamente instructores competentes y capaces. La aplicación acelerada y la inversión en tecnología han alterado la educación, y los instructores desempeñan un papel crucial en la transición a los estándares y métodos de aprendizaje del siglo XXI. Esto es especialmente importante porque el futuro estará dominado por la inteligencia artificial (IA), la tecnología avanzada y la automatización, lo que requerirá que la próxima generación de empleados tenga conocimientos de tecnología. Por lo tanto, este estudio localizará las habilidades digitales para los docentes y brindará recomendaciones y una hoja de ruta que respalden tanto las herramientas tecnológicas avanzadas como las nuevas estrategias innovadoras de aprendizaje en el contexto de la gestión de recursos humanos.

Diseño/Methodología/Enfoque: Los investigadores tomaron una revisión de la literatura como método para determinar la situación actual, los factores de éxito del aprendizaje en línea y las habilidades de los instructores en el contexto de la gestión de recursos humanos. Además, se llevó a cabo un análisis cualitativo en forma de discusión de grupo focal, para resaltar temas relacionados con las necesidades de los instructores para practicar sus roles en el entorno de e-learning.

Hallazgos: Los resultados de este estudio han proporcionado evidencia de que el dominio de los instructores en TI "Instrutores digitales" transformará la enseñanza y el aprendizaje para satisfacer la cuarta revolución industrial que se basa en habilidades digitales y contribuye a la economía digital.

Originalidad/Valor: Se espera que los resultados de este estudio sean un aporte útil para que los formuladores de políticas en educación sean más valientes al tomar decisiones al invertir en recursos de TI y recursos humanos

“instructores” con el fin de crear un entorno de enseñanza y aprendizaje superior y competitivo. En este estudio se propone un marco que considere cuestiones de gestión de recursos humanos que funcionará de manera efectiva para mejorar el papel de la educación digital en la sociedad y contribuir al desarrollo del proceso educativo.

Palabras clave: Gestión de Recursos Humanos, Instructores, Competencias, Aprendizaje Electrónico, Habilidades Digitales.

INTRODUCTION

Digital skills constitute foundational pillars of the digital economy and are defined as the ability to find, evaluate, use, share, and create content using digital devices (Andriushchenko, Khaletska, & Ushenko, 2021). A digitally competent workforce can assist in reinforcing the foundational pillars required to mobilize digital innovations to revolutionize economies, societies, and governments, including e-government services, commercial products, and news, as well as engage with the larger educational community (Bashir & Miyamoto, 2020). Many educational institutions are seeing the move to the development of instructors' merging traditional courses with online learning opportunities (Rudestam & Schoeholtz, 2010; Adeoye, 2020). The accelerated application and investment in technology have altered education, and instructors play a crucial role in the transition to 21st-century learning standards and methods (Mishra & Koehler, 2006). These changes necessitate a variety of behaviors, including creativity, competence, awareness, and dependability in the work of implementing, leading, and interacting with the new learning processes (Almas & Machumu, 2021). Digital instructors play a vital role in educating their students on the importance of digital citizenship and promoting good online behavior. By incorporating digital citizenship principles into their teaching practices, digital instructors can help their students become responsible and ethical digital citizens.

The goal of human resource management (HRM) operations is to help organizations achieve their objectives by putting out initiatives and providing assistance and direction on matters pertaining to employees who work for the organization (Tom 2021). As a result of rapid technological advancements in the modern digital world, business models are evolving, which in turn necessitates a radical shift in human resource management (Fenech, 2022). The introduction and implementation of new technologies in organizations, including educational institutions, result in a continuous evolution of the function of HRM specialists (Mihova & Ivanova, 2020). The efficient use of technology in teaching and learning by educational institutions is largely dependent on HRM practices. Since e-learning is a requirement for 4th generation education, which is demanded by 4th generation industries, educational institutions

were forced to relocate and fully utilize advanced technology in teaching practices (Philbeck & Davis, 2018). Human Resource Management activities and processes are being adapted to new technologies, and HRM is undergoing a radical transformation as a result of the digitization of work processes (Fabbri & Scapolan, 2018; Salamzadeh, Tajpour, & Hosseini, 2019). Unquestionably, the HR manager's role is evolving in terms of what and, more importantly, how their job is performed. The fourth industrial revolution generates transformational changes to the educational systems and practices designed and implemented by HR managers to effectively and efficiently manage the teaching and learning process (Gikopoulos, 2019). Not all actors have been adequately prepared to adapt to this change: instructors' capacity to handle online and virtual learning is crucial to promising its successful deployment (Alainati 2015). However, the importance of instructors in adopting online and virtual learning cannot be overstated (Alainati, Al-Hammad, & Alhajri, 2023 A).

Many e-learning frameworks and models have been proposed to investigate and outline e-learning issues. However, these frameworks mainly cover common e-learning issues, while missing instructors' competencies, as well as HRM issues (Alainati S. J., 2021 B). We expect the results to be useful for the academic community in their quest to ensure instructors engage more actively and creatively with e-learning and thus improve teaching and learning processes through the uptake of and competence in innovative learning in the digital era. This paper reviews literature including models and frameworks that focus on the skills of the digital instructor in the innovative learning environment, and spotlights on HRM practices and activities undergoing a radical transformation because of the digital transformation of schools and colleges which requires enhancing digital competencies of instructors (Chytiri, 2019). Specific research objectives are:

1. Review the literature concerning e-learning practices to understand success stories and research results for digital instructors and related competency models and frameworks.
2. Identify Key areas and missing factors related to enhancing the competencies of the digital instructor, and future trends in innovative learning.
3. Provide recommendations and a road map that support instructors' digital competencies in the context of human resource management.

THEORETICAL FRAMEWORK

Most educational institutions trained instructors to use online and virtual learning, focusing on the use of technology such as LMS, e-books, LXP, video conferencing, and other related technological issues (Nutsunidze & Schmidt, 2021; Al-Hunaiyyan, Al-Sharhan, & Al-Hajri, 2020). Technical skills alone are insufficient in this changing environment, instructors must also acquire the skills of modelling learners' social and cognitive abilities (Alainati S. , 2021 A). In addition, instructors should change the way they deliver content to while achieving the educational objectives so students can learn appropriately (Al-Hunaiyyan, Alhajri and Al-Sharhan 2018). The biggest challenge will be the continuous professional development of instructors to keep pace with developments in the information and technology field (Al-Hunaiyyan, Alhajri, Alghannam, & Al-Shaher, 2021 B); The spread of artificial intelligence (AI), the use of data science, and the proliferation of talent cities in schools increase the need for advanced skills in the management of the educational system and the preparation of educational content (Jackson, 2019; Ferrer, 2023).

Instructors' Collaboration in Online and Virtual Learning

Instructor' role in online collaborative learning is to facilitate, guide, and support learners in achieving their learning goals. Instructors play a crucial role in creating an environment that encourages collaboration, active participation, and learning. The followings are some models and frameworks that can be used by digital instructors to collaborate with students in the online learning environment. Community of Inquiry (COI) is a Framework introduced by (Garrison, Anderson, & Archer, 2001). The COI Framework focuses on three elements: cognitive, social, and teaching presence. It emphasizes the importance of building a sense of community among students, encouraging critical thinking, and facilitating meaningful discussions. While Constructivist Learning Framework is based on the idea that students construct their knowledge and understanding of the world through active participation and collaboration. The framework directs instructors to facilitate this process by creating opportunities for students to explore and share their ideas and perspectives (Kurt, 2021; Al-Doub, Goodwin, & Al-Hunaiyyan, 2008). Connectivism (Siemens, 2005) is a learning theory that emphasizes the importance of creating connections between information and people. Instructors can leverage technology to create networks of learners, foster collaboration, and facilitate knowledge creation and sharing. On the other hand, Problem-Based Learning (PBL) is an instructional method that focuses on real-world problem-solving. Instructors can create

collaborative projects and assignments that require students to work together to identify, analyze, and solve complex problems (Barrows, 1996). A model developed by (Yengin, Karahoca, Karahoca, & Yucel, 2010) outlines the steps instructors can take to develop content for online learning that effectively engages students. It also provides instructors with access to free tools for producing interactive learning. Similarly, (Brown, Bird, Musgrove, & Powres, 2017) Utilize a variety of innovative strategies, such as merging learning theory and technology, innovative problem-solving using technology, including more technological tools for practical application, and displaying knowledge through technology.

Evaluation of Online and Virtual Learning

The purpose of e-learning in education is to promote the development of 21st-century abilities among students (Koh, Chai, & Lim, 2017). Evaluation and quality assurance are important factors in achieving such a goal. It is essential to introduce some models and frameworks that can be used by digital instructors to evaluate the effectiveness of online learning (Al-Sharhan & Al-Hunaiyyan, 2012). The Community of Inquiry Framework is a model for understanding and evaluating the learning experience in online courses. The model includes three main components: social presence, cognitive presence, and teaching presence. Instructors can use this framework to evaluate the effectiveness of their online courses, and to identify areas for improvement in each of these three components (Garrison, Anderson, & Archer, 2001). Another important framework is Quality Matters Rubric (QM, 2018). The Quality Matters Rubric is a framework for evaluating the quality of online courses. The rubric includes eight general standards, each with specific criteria, that cover course design, assessment, and course delivery. Instructors can use this model to evaluate their online courses, and to identify areas for improvement. In addition, Gagne's Nine Events of Instruction framework (Gagne's, 1965), helps instructors create effective online courses. The model can also be used to evaluate the effectiveness of an online course. Instructors can assess learners' understanding of each of the nine events and use this information to make improvements to the course design and delivery.

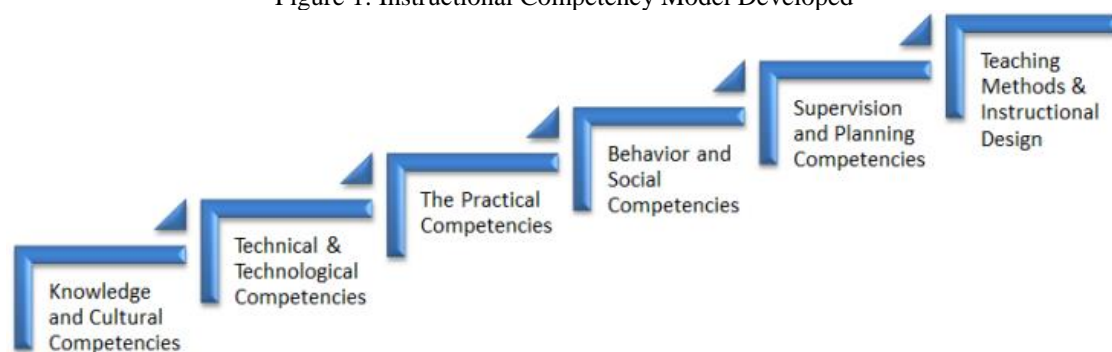
A study conducted by (Hadollu, 2021) to create a Competency-based education (CBE) Framework that can be supported by Moodle LMS to successfully offer online Courses. According to (Pearson, 2015) , CBE describes an approach of instruction, assessment, grading, and academic reporting, that focuses on students demonstrating that they have acquired the needed information and abilities as they advance through their educational journey, improving

teachers understanding of future digital education (Ally, 2019). However, (Hadollu, 2021) stated that little is known about how to develop, design, and implement an online supported CBE program to ensure that students complete activities. In order to establish an online CBE framework suitable for Higher Education Institutions (HEIs) in Kenya, he presents theoretical viewpoints on CBE. Planning, Design, Implementation, and Improvement were the most critical elements in determining the effective implementation of an Online CBE program in HEIs, according to the study.

Instructors' Digital Competencies in the Digital Era

There are several models and frameworks that can be used by digital instructors which can be used to design and develop effective online courses that meet the needs of different learners (Alhajri, Al-Sharhan, Al-Hunaiyyan, & Alothman, 2011). Online learning frameworks are set of tools and recommendations that provides guidance for the development of digital learning resources. They are guides for the learning community that support pedagogical aspects. The authors (Al-hunaiyyan, Al-sharhan, & Al-sharah, 2012) proposed an Instructional Competency Model, Figure 1. The model stressed behavioral, social, and cultural dimensions due to their importance within the shift to e-learning (Al-Hunaiyyan & Al-Sharhan, 2009). The model demonstrates how an instructor can gradually improve their competence levels with a focus on planning instructional design, and e-Content development. Another useful framework was created by (Pérez-Sanagustin, Kotorov, Teixe, Mansilla, & Broisin, 2022) to recognize the teaching and learning competencies targeted by institutions, their shortcomings, and their planned modifications. In particular, the analysis demonstrates that most institutions had instructor training programs in place prior to this period, primarily in the areas of digital technology and pedagogical quality, but that other efforts have since been implemented, such as students' support actions, were created to reinforce them.

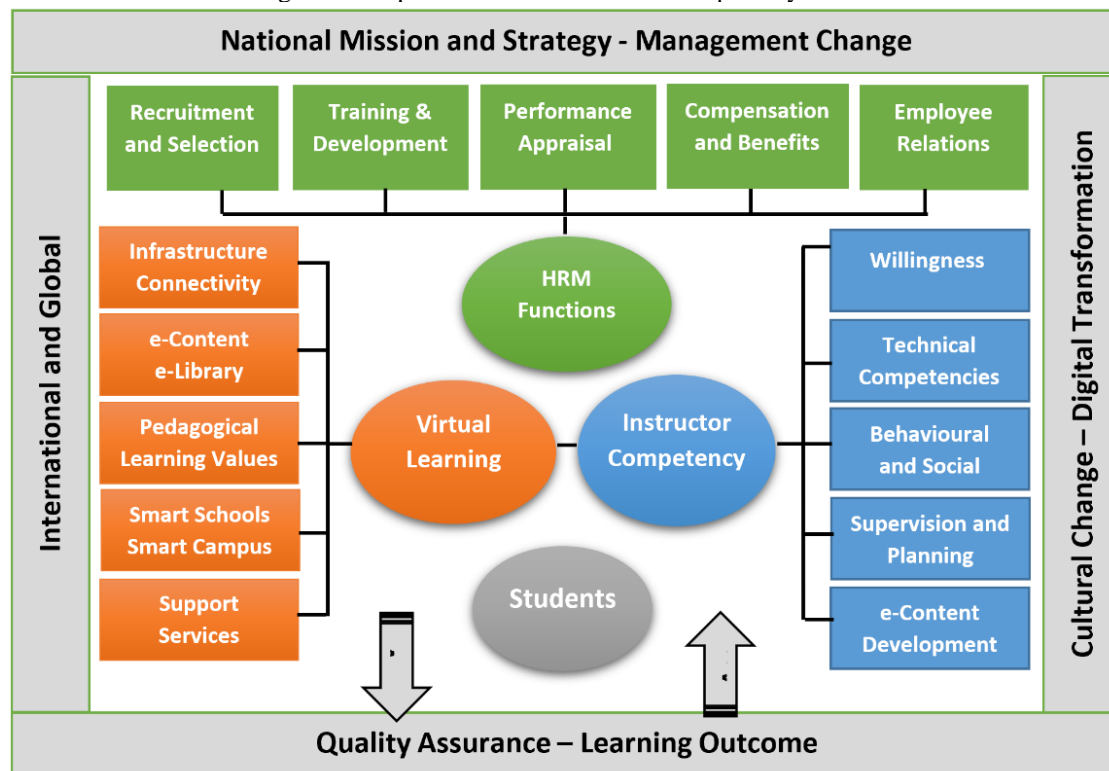
Figure 1: Instructional Competency Model Developed



Source: Al-hunaiyyan, Al-sharhan, & Al-sharah, 2012

According to (Dooley, Lindner, & Richards, 2003), areas of competence are important factors in today's teaching and learning. They listed ten important competencies for digital instructors that needs considerations: Course planning; presentation skills; teamwork; Questioning; Subject matter expertise; Involving in activities at field sites; basic learning theory; basics of distance learning; Design of study guides; Graphic design and visualization. In addition, research conducted by (Alainati S. , 2021 A) has led me to develop a comprehensive HRM-Instructure Competency Model, illustrated in Figure 2, which offers educational institutions valuable guidance on how to effectively facilitate virtual and blended learning. Particularly in challenging times like the Covid-19 crisis, it is essential for HRM practices to adapt and enable uninterrupted online education. This includes utilizing new learning technologies, while ensuring continued student engagement and instructor proficiency.

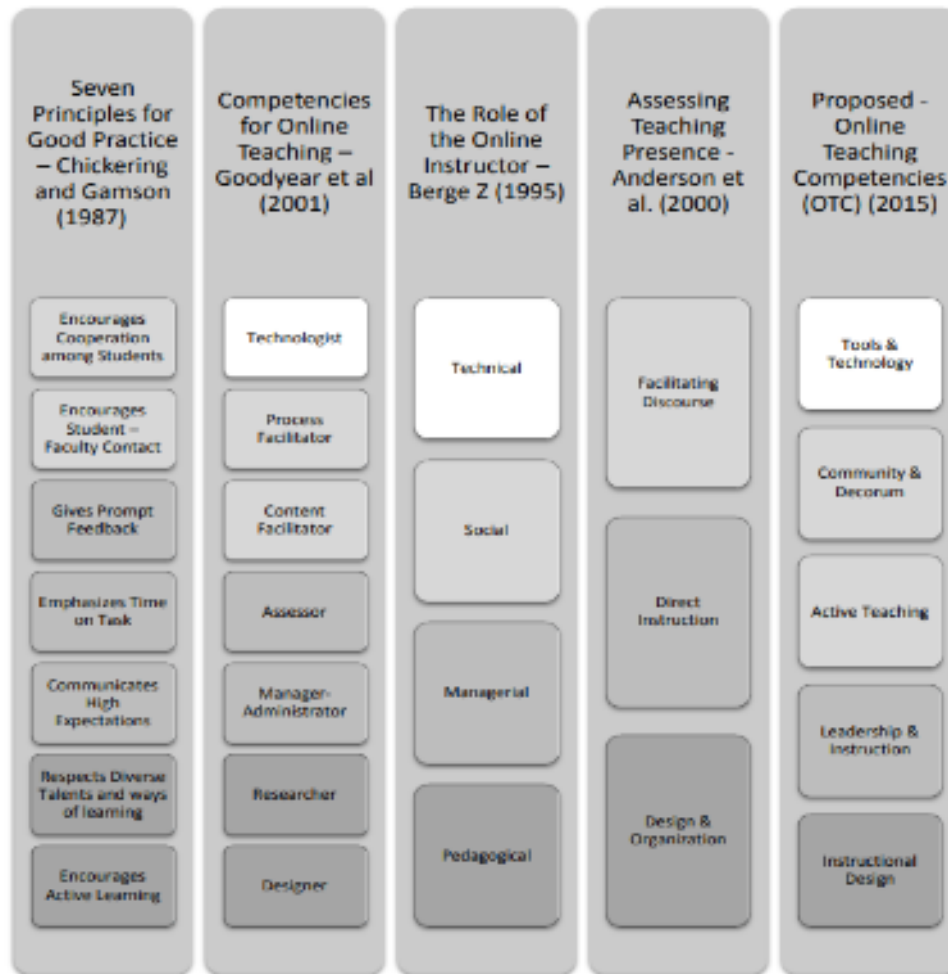
Figure 2: Proposed HRM-Instructors' Competency Model



Source: Alainati S. , 2021 A

An interesting study conducted by (Farmer & Ramsdale, 2016) to identify key competency areas that lead to success in online instruction. They designed a framework that supports instructor professional development, and identify important competency areas, abilities, and behaviors. The resulting analysis produced the Online Teaching Competency (OTC) Matrix including five competency areas: Community & Netiquette, Active

Figure 3: A Framework of online teaching competencies (OTCs) developed

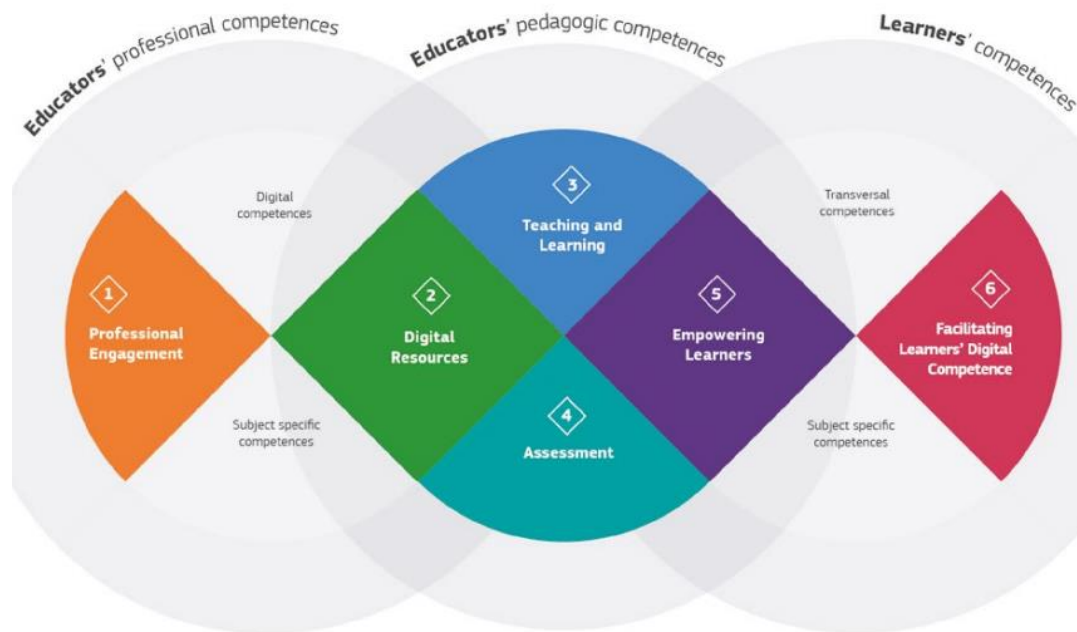


Source: Farmer & Ramsdale, 2016

Teaching/Facilitating, Instructional Design, Tools & Technology, and Leadership & Instruction (Ruiyao, Keat, & Ahmad, 2023). Figure 3 shows a framework of online teaching competencies (OTCs) developed by (Farmer & Ramsdale, 2016).

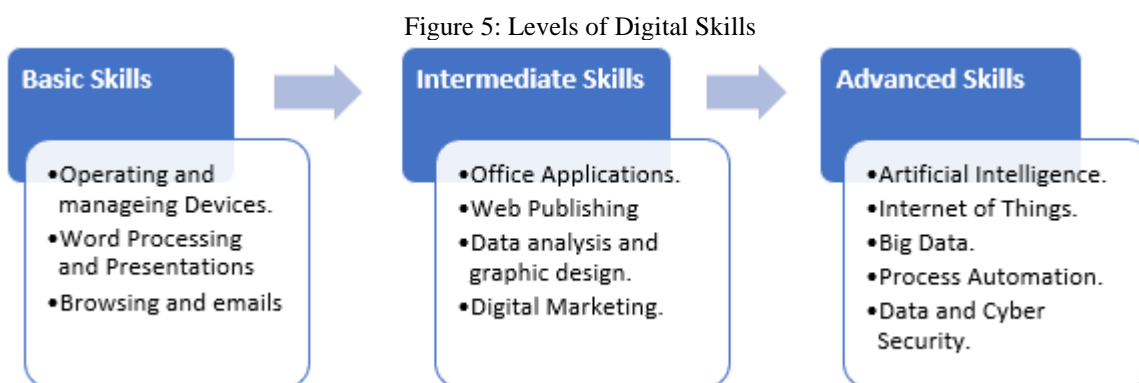
According to (Redecker, 2017), instructors must possess a broader and more sophisticated set of competencies than in the past due to the rapid evolution of educational expectations. Specifically, the prevalence of digital devices and the obligation to assist students in becoming digitally competent necessitate educators to develop their digital competence. The DigCompEdu framework, developed by (Redecker, 2017), in cooperation with European Commission's science and knowledge service seeks to provide a broad framework for Digital Competence model creators. Areas and scope of the framework, Figure 4, include Educators' professional competencies; Educators' pedagogic competences; and learners' competences.

Figure 4: European Framework DigCompEdu, Areas and Scope



Source: Redecker, 2017

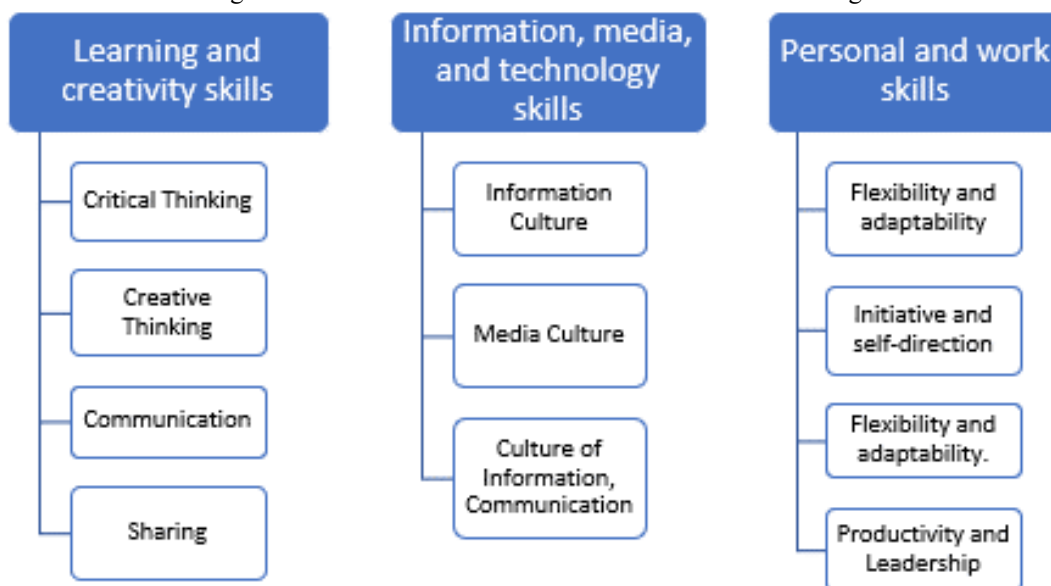
The rapid development in the digital field is followed by a continuous change in the map of required skills and related jobs. In the 2020 report (World Economic Forum, 2020), among the more than (20) professions required until the year 2025, (11) professions related to technological skills came from them. The countries of the Gulf Cooperation Council, and the Arab countries alike, must pay attention to this rapid change in the map of required skills, and work to meet these challenges, which is represented in the continuous updating of their strategies and training programs based on digital skills, which is not easy (Al-Hunaiyyan, Alhajri, & Al-Sharhan, 2017). In order to respond to these challenges, digital skills have been divided into three levels by (ITU, 2018 B), as illustrated in Figure 5.



Source: (ITU, Digital Skills Toolkit, 2018 B)

Social skills and content preparation skills will be the characteristic of the "teacher of the future", whose role will be to lead the educational process in a creative way (Beers, 2014). Accordingly, the biggest challenge will be the continuous professional development of instructors to master the developments in the information and technology field. The spread of artificial intelligence (AI), the use of data science, and the spread of talent cities in schools increase the need for advanced skills for managing the educational system and preparing educational content (Bernie & Fadel, 2009). The skills within the framework of learning for the twenty-first century that are required to keep up with digital education are summarized in Figure 6 by (Bernie & Fadel, 2009).

Figure 6: Instructors' Skills within the framework of learning



Source: Bernie & Fadel, 2009

HRM Considerations

The efficient use of technology in teaching and learning by educational institutions is largely dependent on HRM practices. Educational institutions are forced to relocate and fully utilize advanced technology in teaching practices to satisfy the 4th generation industries. Human Performance Technology (HPT) is a field of practice aimed at improving the performance and productivity of individuals and organizations. It involves the application of various principles, methods, and techniques to analyze instructors' performance in educational institutions (Pershing 2006). The ultimate goal of HPT is to close performance gaps and achieve better outcomes. HPT focuses on the needs, capabilities, and motivations of instructors within the institutions. It recognizes that improved human performance leads to better outcomes

(Zareie & Navimipour, 2016). By optimizing human performance, schools and colleges can achieve better outcomes, improve teaching and learning, and enhance instructors' satisfaction (Conklin 2019). Digital instructors, as part of the broader concept within the framework of human performance technology, can be utilized to facilitate learning experiences for individuals (Staff Writer 2023). They can deliver learning materials, provide interactive exercises, utilize AI tools, and offer personalized feedback to learners, contributing to closing performance gaps related to knowledge and skill deficiencies. By leveraging technology to deliver targeted learning solutions, schools, and colleges can enhance the effectiveness and efficiency of their learning initiatives and, ultimately, drive better performance outcomes (Al-Hunaiyyan, Al-Sharhan, Al-Hajri, & Bimba, 2021 C; Sutrisno, Ausat, Permana, & Harahap, 2023).

The predominant models of human resource management place a strong emphasis on strategic and structural alignment with organizational objectives and are primarily concerned with organizational rationality and control objectives (Pinnington, Macklin, & Campbell, 2007). The digitization of the HRM function also reflects this shift toward a more creative and innovative function (Chytiri, 2019). According to (Gikopoulos, 2019), as the HRM function becomes more digitalized, it can advance other support functions. These functions include deep analytics and an overall higher level of performance; efficiencies in employment (Khahro, Hassan, Zainun, & Javed, 2021); transparency and greater access to closed data sets (Abolhassan, 2017); monitoring of employees in real time. In the context of Artificial Intelligence (AI), (Baranes & Palas, 2019) describe how machine learning tools can produce high-quality models for computationally intensive and time-consuming decision-making tasks and processes (Almustafa, Assaf, & Allahham, 2023). This will influence HR analytics as well as the forecasting processes that are associated with HRM. This revolution affects people's perceptions of the value that HRM adds to organizations, while simultaneously elevating the importance of HRM within those organizations (Alainati, Al-Hammad, & Alhajri, 2023 A). However, as stated by (Simoës, Duarte, Neves, & Silva, 2019), "outdated" HRM models associated with a social-values orientation and the promotion of workplace welfare continue to influence the decisions and practices of HR managers. Younger employees, considered as "digital natives", who grew up in a digital environment are considerably more complex and heterogeneous than their predecessors (Helsper & Eynon, 2010). A new generation of people with particularly different attitudes, qualifications, behaviors, and expectations has emerged as a result of interaction with digital technologies. Prospective new entrants to organizations from this generation are more multitasking, have digital capabilities, prefer and seek out more

information and networking, learn by doing, and demand more and instant gratifications and rewards.

RESERACH METHODOLOGY

The researchers will conduct a comprehensive literature review as a method to determine the current situation, success factors of online learning, instructors' skills in the context of HRM. In addition, the authors of this article are going to conduct a review and analysis of international models and frameworks for distance and online learning, with a particular focus on instructor competency models and frameworks. In addition, a qualitative analysis will be conducted in the form of a focus group discussion, in which 15 instructors from the College of Business Studies in Kuwait take part in the discussion. Accordingly, the methodology includes:

1. Review the literature concerning instructors' competencies to understand success stories and research results focusing on human resource management issues.
2. Conduct a qualitative analysis in which a focus group discussion was organized, and fifteen instructors from the College of Business Studies in Kuwait took part in the conversation. The purpose of the session was to investigate and find issues related to the requirements of the digital instructor, as well as the role that management and administration play in this context.

RESULTS AND DISCUSSION

Focus Group Discussion Session

The qualitative approach used was a focus group discussion session which was organized, in which 15 instructors were involved to participate in the discussion considering their individual differences (Alhajri & Al-Hunaiyyan, 2016; Alhajri, Al-Sharhan, Al-Hunaiyyan, & Alothman, 2011; Alhajri, Al-Hunaiyyan, & Almousa, 2017). The objective was to ask the participants to give their thoughts, notes, and ideas about their experiences, including their opinions about the use of online learning including instructors' role and skills in the online learning environments, the delivery, and evaluation of online learning and the role of college administration in that.

Participants discussed the benefits and drawbacks of online learning experiences during the discussion session. As for the benefits, one participant stated that online learning was a solution for dealing with the Corona virus, another participant stated that teaching online was

enjoyable, particularly with a small number of students, and a third participant stated that it was a very interesting experience at the outset. A member of the faculty remarked that online learning encouraged instructors and students to develop their technology skills. In a similar fashion, the college provided online training to instructors to enhance their technical abilities. In addition, it is stated that online platforms provide instructors with a variety of useful functions. While another participant stated that online learning aids in preparing students for the labor market by utilizing the market-required advanced technologies, it is also stated that online learning aids in preparing students for the workforce. According to one source, the use of e-learning platforms contributed to the creation of a paperless environment, and the auto-correction feature, especially for exams, saves instructors a substantial amount of time. During the focus group session, it was mentioned that cameras help to monitor students during exams, that the help desk has a quick response time for technical issues, and that students' attendance is easier to track online. It was also stated that instructors can use a variety of media and tools for instruction, and that online learning is both time-saving and efficient.

Included in a summary of instructors' comments on the benefits of online learning are: The concepts of the adaptability of online education (which permits students to study at their own pace and convenience) were emphasized. In addition, it was emphasized that online learning can be tailored to the specific needs of each student. In addition, numerous learning resources are available (Online learning can provide access to a wide range of multimedia resources). Similarly, Enhanced availability (Online learning can provide access to education anytime anywhere). In addition, increased collaboration and participation (through virtual discussion boards, group projects, and other interactive activities, students collaborate and participate more), and cost-effectiveness (Online learning can be less expensive than traditional classroom-based learning, as it can eliminate the need for physical classroom space and course materials).

Teaching online comes with several challenges. Participants pointed to issues such as communication difficulties, hard to manage virtual classrooms, and difficulties teaching specific subjects such as practical and lab classes. It is also worrying that e-learning platforms may be misused, and students may face issues due to inadequate internet connectivity and a lack of private study spaces. Many instructors said that learning may not always be comprehensive, cheating during online exams is a possible concern. In addition, it was mentioned that students with learning disabilities may require extra support, and technical assistance may be insufficient. Additionally, poor interaction between students and teachers

can be a problem. Instructors may struggle with using online tools effectively, and the college administration may face challenges with incompetent instructors. One said, “we as instructors paid equally, professional and not competent instructors are in the same boat”. Another said “There are some instructors do not know how to move the mouse!!! How come they still keeping the job?”. Similar to that, one said “I know upon faculty recruitment requires ICD exam, but how do they appoint faculty members who do not know how to use technology!”.

Instructors' Digital Competencies in the Context of HRM

According to (Nutsudidze and Schmidt 2021), most educational institutions encourage their instructors to use online and virtual learning while training them on the use of technology, however, less focus was given to e-content development (Peterson, 2003), as well as issues related to behavioral connection, collaboration, and relationship development amongst instructors as well as between instructors and students (Al-Hunaiyyan, Alhajri, Alzayed, & Alraqqas, 2016). In a successful online learning environment, instructors must consistently participate, communicate effectively, facilitate regular group discussions, and provide students with direction and encouragement. Technical competencies are not enough in this digital era, instructors must possess a wide range of technical and operational skills, pedagogical, social skills, and content preparation skills which will be a feature of the “instructor of the future,” whose role will be to lead the educational process (Al-hunaiyyan, Al-sharhan, & Al-sharah, 2012; Ally, 2019; Bigatel, Ragan, Kennan, May, & Redmond, 2012).

In order to achieve the ultimate goal in the educational field and enhance it through digital transformation, the application of digital education or the development of smart digital schools must be in accordance with a clear strategy and through a scientific model that defines its pillars and an integrated executive framework through which its various components that form the system are implemented and integrated with each other effectively and accurately (Bashir & Miyamoto, 2020; Al-Hunaiyyan, Al-Sharhan, Al-Hajri, & Bimba, 2021 C). The goal is to achieve the best desired results from the implementation of the digital school system and to ensure its success (Brown, Bird, Musgrove, & Powres, 2017). In addition, to be able to provide pedagogical educational potential using unique educational resources and tools (Adeoye, 2020; Al-Hunaiyyan, Hewitt, Jones, & Messer, 1999). Learning management systems (LMSs) or smart learning experience management systems (LXPs), as well as interactive electronic curricula, digital libraries, resources, and enrichment materials, regularly help students develop their scientific abilities and skills, enabling them to deal with modern

knowledge (Redecker, 2017). The new system should empower members of the teaching staff to develop their abilities and educational tools and to guide the educational process by enabling administrators to develop and activate administrative resources to serve students and faculty (supervisors).

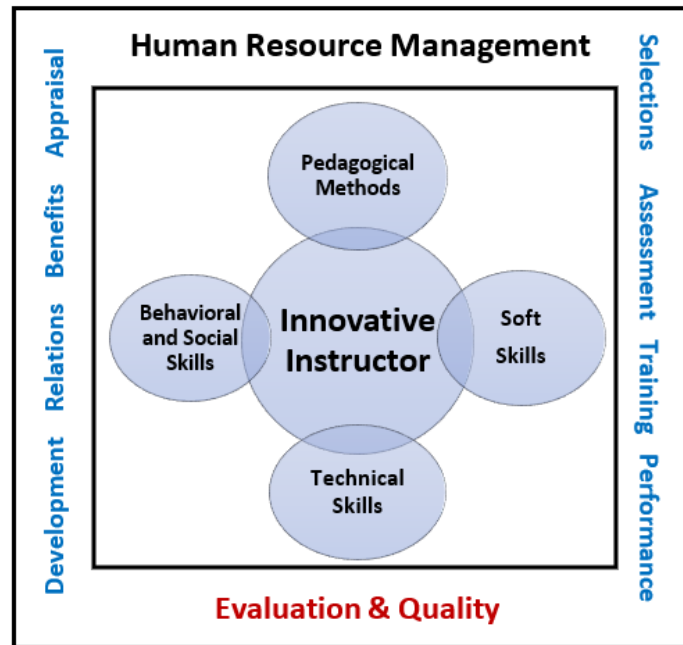
The majority, if not all, of the content of the academic institutions has been digitized. Since all information is either digital or has been digital, instructors are increasingly dependent on digital tools and media. Therefore, a new set of technical and mental skills to systematically acquire, process, produce, and use information are required for effective job performance (Bawden, 2008). In respect to school administrators, managing instructors obviously differs from managing common employees in many aspects such as performance or development. HR professionals, then, beyond appreciating the demands of these technological shifts on the structure of the workplace, must embrace them. Confront the difficulty of formulating appropriate strategies and policies with the help of automation. The fate of organizations and the success of any business is determined by the quality of its human capital and how its human resources are digitally managed (Chytiri, 2019). Digitized HR activities in educational institutions are the most important way to ensure these determinants, which assist any school and college in effectively executing its strategy and meeting its operational and strategic goals (Deloitte, 2017). This means that HR managers must shift their role from diagnostic and descriptive of the workforce to predictive and prescriptive, or from operational to strategic (Aguinis & Lawal, 2013). To control the in-depth workforce analytics and use digital technologies for HR functions, this transformation necessitates recruiting technologically educated instructors and administrators, filling the skills gap, and retaining employees (Ulrich & Dulebohn, 2015).

HRM in educational institutions should adapt its strategies and activities to the new "digital instructors" workforce supporter. The strategic and operational adaptation of HRM to a changing workforce is a prerequisite for supporting organizations in the future (D' Netto & Ahmed, 2012; Frey & Osborne, 2017), through the implementation of new, different, and automated recruiting, selecting, and leadership practices (Almonawer, et al., 2023; Alainati, Al-Hammad, & Almonawer, 2023 B). Effective recruitment and selection are crucial elements of HR management, ensuring that every position is filled with high-quality, digitally oriented instructors to maintain sufficient staffing levels. Once hired, organizations must provide opportunities for training and development to improve instructors' skills (Alhouti, 2020). Performance appraisal is an effective tool for directing behavior and monitoring goal

achievement. In-house appraisal systems should be developed to assess instructors' performance (Menon, 2015). Compensation for active instructors is centralized by HR management, but it has been noted that certain educational institutions fail to link it to promotions or bonuses. Relationships between instructors, administrators, and management are essential in educational institutions, and instructors should be encouraged to voice their concerns about their work. Administrators must keep instructors informed on technological and pedagogical trends to ensure digital teaching and learning competency. Evaluating instructor competency in digital teaching is a complex task that cannot be taken lightly. Educational institutions must carefully consider a range of technical features, social norms, and pedagogical issues, including but not limited to learning strategies, access, informality, engagement, and ubiquity. These factors must be thoroughly examined to ensure the highest standards of digital instruction are being met.

Many important factors help in the implementation and integration of the digital creative education system (Al-Sharhan, Al-Hunaiyyan, & Gueaieb, 2006). These factors include instructors' competencies in several aspects such as technical, behavioural, pedagogical, personal, where these factors overlap and integrate to form an integrated and interdependent system (Al-Hunaiyyan, Al-Hajri, & Bimba, 2021 B; Al-Hunaiyyan, Alhajri, Alghannam, & Al-Shaher, 2021 B). This paradigm, as depicted in Figure 7, with consideration of human resource management issues will work effectively to enhance the role of digital education in society and contribute to the development of the educational process. We must not overlook the development of modern and flexible policies and legislation, which are necessary for such kind of digital transformation, and enable maximum use of information and communication technology in the field of education. There is no doubt that the absence of an integrated system for the application of e-learning at the national level, as well as the absence of scientific standards to measure the efficiency of the various components of digital education, in addition to the absence of an integrated framework for developing the capabilities of teachers to be effective in the digital education environment (Al-Hunaiyyan, Alhajri, Alzayed, & Alraqqas, 2016; Liu, Zhao, & Su, 2022).

Figure 7: Human Resource Management integration into Instructor's Innovative Skills



Source: Prepared by the authors.

CONCLUSION

This paper reviewed related literature, including models and frameworks, and conducted a focus group discussion that focus on the skills and competencies of the digital instructor and the role of HRM in creating innovative learning environment. The findings emphasized on the critical role of HRM in educational institutions which should adapt its strategies and activities to the new "digital instructors" workforce supporter. Many important factors help in the implementation and integration of the digital creative education system. In online learning environments, instructors play a crucial role in the context of human resources and online learning delivery. They are responsible for facilitating and guiding the learning experience for learners, providing feedback and support, and evaluating learners' performance. Instructors' competencies cover several aspects such as technical, behavioural, pedagogical, personal, where these aspects overlap and integrate to form an integrated and interdependent system. With consideration of human resource management issues, the system will work effectively to enhance the role of digital education in society and contribute to the development of the educational process. The strategic and operational adaptation of HRM to a changing workforce is a prerequisite for supporting organizations in the future. As a result of the rise of digital technologies, HR managers' roles have shifted from being purely administrative to also including strategic planning. Human resource managers face several challenges and opportunities in the transition to a digital workplace, including the need to connect effectively

digital instructors with automated jobs and the new digital forms and organizational structure. Filling the current void in digital expertise requires new approaches to human resource management in the areas of instructors' teaching engagement, training and development, and talent retention.

As for future work, we expect that the review presented in this paper might assist researchers to propose and develop a new digital instructors' model or framework in the context of human resource management, especially that we are living in a new digital era with the emerged of technological tools and applying new innovative learning strategies that support and enhance instructors' competencies and skills.

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