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REFLECTIONS ON EDUCATING AND TRAINING PROFESSIONALS IN THE CURRENT TIMES: DO WE NEED EDUCATORS OR STREAMERS?

REFLEXÕES SOBRE A FORMAÇÃO DE PROFISSIONAIS NOS TEMPOS ATUAIS: PRECISAMOS DE EDUCADORES OU STREAMERS?

REFLEXIONES SOBRE LA EDUCACIÓN Y FORMACIÓN DE PROFESIONALES EN LOS TIEMPOS ACTUALES: ¿NECESITAMOS EDUCADORES O STREAMERS?

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ABSTRACT
The past 20 years have been life changing. Since mankind witnessed industrial revolutions, there has never been a technological evolution (now coupled to the digital one) in such a short time span. The cost reduction for the production of electronic devices and the emergence of a labor market in the area of information technology were indispensable factors for the immersion of a significant part of the world society into the digital age. Technology companies began to occupy hitherto almost unexplored spaces. With data informatization, many processes became more agile and easier to be monitored and managed. Financial systems have now eliminated part of their physical workstations, replacing them with artificial intelligence. The media and companies of various segments, more adherent to algorithms capable of directing personalized content to each user, experience a new sales cycle. The dissemination of communication networks based on 5G technologies allows for a greater access to internet contents, which are not scarce. People are getting more and more exposed and also more and more willing to be exposed. In the educational sphere, there is an increase in the consumption of information which is not necessarily quality related. Open channels on non-institutional platforms sell 'miraculous' methodologies for learning various subjects, ranging from Engineering to Law. But is this really the path to modernize education? The present article aims to reflect on the current scenario, focusing on the Brazilian context, an emerging country with a high population index.

KEYWORDS: Education. Massive Open Online Courses. Platforms. Universities.

RESUMO
Os últimos 20 anos foram transformadores. Desde que a humanidade presenciou as revoluções industriais, nunca houve evolução tecnológica (agora agregada à digital) em escala de tempo tão curto. A redução de custos para produção de dispositivos eletrônicos e o surgimento de um mercado de trabalho na área de tecnologia de informação foram fatores imprescindíveis para imersão de grande parte da sociedade global na era digital. Empresas tecnológicas começaram a ocupar espaços até então pouco explorados. Com a informatização dos dados, muitos processos tornaram-se mais ágeis e fáceis de serem monitorados e geridos. Sistemas financeiros eliminaram parte de seus postos de trabalho físico, substituindo-os por inteligência artificial. Os meios de comunicação e empresas de diversos segmentos, mais adeptos aos algoritmos capazes de direcionar conteúdo personalizado a cada usuário, experimentam um novo ciclo de venda. A disseminação de redes de comunicação baseadas em tecnologias 5G permitem maior acesso a conteúdo na internet, que não são poucos. As pessoas estão mais expostas e, também, dispostas a se expor. No âmbito educacional, nota-se um aumento no consumo de informação que, não necessariamente, está relacionado à qualidade. Canais abertos em plataformas não institucionais vendem metodologias 'milagrosas' para aprendizagem de vários temas, desde as engenharias até a área do direito. Mas será esse o caminho para modernizar a educação? O presente artigo objetiva refletir sobre o atual

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cenário tendo como realidade o contexto brasileiro, país emergente e com elevado índice populacional.

PALAVRAS-CHAVE: Educação. EaD. Plataformas. Universidades.

RESUMEN
Los últimos 20 años han sido transformadores. Desde que la humanidad fue testigo de revoluciones industriales, nunca ha habido evolución tecnológica (ahora añadida a la digital) en una escala de tiempo tan corta. La reducción de costos para la producción de dispositivos electrónicos y la aparición de un mercado laboral en el área de la tecnología de la información fueron factores esenciales para la inmersión de gran parte de la sociedad global en la era digital. Las empresas tecnológicas comenzaron a ocupar espacios hasta entonces poco explorados. Con la informatización de datos, muchos procesos se han vuelto más ágiles y fáciles de monitorear y administrar. Los sistemas financieros eliminaron parte de sus trabajos físicos, reemplazándolos con inteligencia artificial. Los medios y empresas de diversos segmentos, más adeptos a algoritmos capaces de dirigir contenido personalizado a cada usuario, experimentan un nuevo ciclo de ventas. La difusión de redes de comunicación basadas en tecnologías 5G permiten un mayor acceso a contenidos en Internet, que no son pocos. Las personas están más expuestas y también dispuestas a exponerse. En el ámbito educativo, hay un aumento en el consumo de información que no está necesariamente relacionado con la calidad. Los canales abiertos en plataformas no institucionales venden metodologías "milagrosas" para aprender diversos temas, desde la ingeniería hasta el área del derecho. Pero, ¿es esta la forma de modernizar la educación? Este artículo tiene como objetivo reflexionar sobre el escenario actual con el contexto brasileño como realidad, un país emergente con un alto índice de población.

PALABRAS CLAVE: Educación. Ead. Plataformas. Universidades.

INTRODUCTION

In terms of technology development, the past two decades have shaped an evolutionary timeline. The domain of technologies for manufacturing and miniaturizing chips and many other electronic devices, as well as the emergence and consolidation of a labor market based on artificial intelligence have contributed to digitalization and improvement of numerous services. Urban mobility, air traffic control, banking and financial systems, means of communication are just a few examples. Along with those advances, the dissemination of networks using the 5G and other similar technologies - which contribute to a true immersion in the digital world - stands out. Currently, it seems that no economic sector is unaffected by this transformation, education included.

In the early 2000s, many education institutions were already experimenting with innovations of the digital age. Teaching techniques and tools were being improved or developed to cope with the new demands. Starting in 2020, due to the global spread of the SARS-CoV-2 virus (CORRÊA H; CORRÊA D, 2020), many education institutions in Brazil were forced to readapt; and when faced with the challenge of providing broad and unrestricted education, Public Universities have had to rapidly adhere to remote learning.

In a country where access to formal education is still very limited (‘TODOS PELA EDUCAÇÃO’ - ALL FOR EDUCATION, 2018), making it difficult for many young people to enter the job market, the consumption of contents in digital platform channels is a questionable issue. Very often these are previously recorded materials, without any possibility of interaction and, thus,

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monitoring - on the part of the tutor - the correct understanding of the content. As a result, there is an imminent risk of misinterpretation, compromising the correct construction of knowledge.

It is not the intention of this article to completely execrate the contents and channels available on various digital platforms. They are important, especially for qualifying and developing the necessary skills for those who want to get updated for the job market, as pointed out by the World Economic Forum (2020). They are also of interest in helping the dissemination of knowledge (UNITED NATIONS, 2022). However, they should, as they are, be considered only as value-adding tools in the students' education process.

What we see in Brazil is the dissemination of channels that very often are not pedagogically structured. But they do have a large audience, even willing to pay to have access to them. It is in this context that unprepared educators can take unfair advantages. The obstacles to entering formal education, added to the natural restlessness of a generation of young people in a world where patience is no longer a virtue, create the perfect scenario for the emergence of such educational channels. Currently, YouTube is the 2nd most accessed social platform in the world, with 51 million active channels by 2022 (GLOBAL MEDIA INSIGHT, 2022). According to data provided by Google, 86% of the North American users frequently use the platform for learning (GOOGLE, 2022).

According to data obtained from YouTubeEdu - YouTube's education platform for elementary, high school, and college education (CHEN AND GILCHRIST, 2013) -, there were 94 channels on this platform in Brazil in 2022. In 2018, on a global basis, there were 240 channels with 27 million subscribers (OLIVEIRA; VIGGIANO, 2018).

Even courses offered by Universities through their own platforms need to be carefully evaluated and accredited, in Brazil, by a specific government agency (CAMPOS et al., 2013). No matter how rigorous the pedagogical practices are, they may demotivate a number of students due to the absence of a teacher-student interaction. Such courses, characterized as Massive Open Online Courses (MOOC's) (CORMIER; SIEMENS, 2010), had their first registries in 2008 (KHALID et al., 2022) and the accession to them has since grown alongside the need to create new contents (CHENG et al., 2013; LUNDQVIST; WARBURTON, 2019; EDMUNDS et al., 2021). Investments are so far very much associated with infrastructure, graphic design, and technology implementation, and there has been limited evaluation of its impact on learning (CHENG et al., 2013). It is estimated that worldwide the MOOC market will be worth about US$13 billion by the end of 2022 and is expected to reach US$40 billion in 2026 (REPORT LINKER, 2022). Also, according to the same report, different courses take advantage of the virtual environment, being used for elementary schools, undergraduate and graduate courses, as well as corporate environments. In Brazil, the National Education Plan ('Lei n°13005/2014') establishes some national goals, one of which is to raise the rate of enrollment in higher education to 50% of the population aged 18 to 24. In this context, the Secretary of Higher Education of the Ministry of Education considers the elaboration of a plan to expand distance education in Brazilian public universities as opportune (HAJE, 2021).

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According to data by Levy (2007), the student retention rate in online courses in Sweden lies between 60 and 75%. These rates are lower than those obtained when considering face-to-face courses at universities in that country (HSV, 2011). According Goopio and Cheung (2021), over 90% learners in MOOCs never finish a course. Although there is initial interest by the students due to their flexibility, allowing studies to be tailored to individual schedules and interests, there are reports of poorer student performance compared to that in face-to-face courses (Hart *et al*, 2018). When analyzing data from a MOOC course for training dentists, offered for 25 weeks and a 45-hour course load, Oliveira and coauthors (2018) observed a 30% completion rate. They pointed out the adoption of structured pedagogical practices and their continuous monitoring as essential elements to increase the completion rate.

Those data may indicate the importance of participation and social and intellectual integration (MELGUIZO, 2011) of the student which, in an environment conducive to an academic experience, contribute to a higher retention of students (HATOS; SUTA, 2011; MELGUIZO, 2011). Obviously, retention rate involves many other variables, such as the economic, the social, the psychological (MELGUIZO, 2011), the cultural, the demographic, the technological, and the institutional factors (BÄLTER et al., 2013). In his study on student motivation in online courses, Selvi (2010) observed that even in a virtual environment, there is a need for motivational elements, such as the teacher's enthusiasm and his/her friendly relationship with the students, as well as freedom for discussions. Gorghiu and collaborators (2011) concluded that the tutor image in online courses should be proactive and contribute to a collaborative learning, ensuring problem solving, task accomplishment, and reflective actions. As an example, the tutor should act to frequently instigate the audience, through posts, forums, as well as respond quickly to the questions of hir/her students within the virtual environment. In their study related to the performance of students in an online course, Oliveira and coauthors (2018) frequently used messages to keep the attention and focus of the class. This ensures the presence of teaching (EDMUNDS et al., 2021). Inclusive education, however, also requires the participation and engagement of a multidisciplinary pedagogical and technological group (NIEVES et al., 2019; FREIRE, 2020).

In courses where practicum is a must, content assimilation may be impaired by the remote mode, as indicated by Gavrel and coauthors (2016). When discussing their experiences with distance learning courses for physical therapists during a pandemic period, Mendonça et al., (2022) observed that face-to-face teaching is necessary for the acquisition of specific skills required for physical therapists. In this sense, Bill n° 5.414/2016 is pending in the Chamber of Deputies (Brazil), which changes one of the texts of the Law of Directives and Bases of Education in Brazil (Law n° 9.394/1996). The project aims to prohibit the development of courses in the area of healthcare in the distance learning mode. The main argument is that the training of healthcare professionals requires in-depth theoretical and technical knowledge that would be impaired when offered remotely.

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Taking into account the three main learning strategies used by students to process and use information, the deep learning strategy and the organizing learning strategy provide the greatest capacity to retain information and construct knowledge (FONTES; DUARTE, 2020). Unlike the surface learning strategy, based on mechanical memorization, where information is handled with limited or no creativity and imagination, the other strategies favor student contestation, reflection, and investigation (BIGGS, 1987; LOURENÇO; PAIVA, 2015; PETRESCU et al., 2015).

Following the line of reasoning according to which the development, creation and sharing of knowledge are the very reason universities exist (SERBAN, 2002), a physical environment that can also enable the development of social skills (VILCEA, 2014) becomes crucial for learning. Thus, face-to-face courses would be both opportune and indispensable for constructing and retaining knowledge.

Even though contemporary society is in a process of unprecedented behavioral changes, the image of a trained teacher who is able to deal with the individual demands of his/her students is indispensable to ensure a more effective education (TUDOR, 2013). This, in theory, is more likely to occur in a physical environment, where different approaches on a subject are offered to the student, but always under the supervision of the teacher. It is up to him to promote interaction with various tools (including multimedia), aiming to build knowledge and enhance new skills. The dissemination and adherence of MOOCs is still unequal in the world, with important barriers (linguistic, technological, and economical/financial) to their implementation in institutions in Latin America (CULQUICHICÓN et al., 2017) and opportunities for action by various actors in the public and private sectors (LOECKX, 2016).

CONSIDERATIONS

Even though, in Brazil, the Law of Directives and Bases of Education (Law 9.394/1996) determines that the government encourages distance education, there should be caveats regarding the use of digital channels as education tools. For now, they should never be considered as the only means for training professionals, much less for basic education. But rather as accessories to add value to the content taught by the teacher/tutor. In a continental country such as Brazil, where inequality in education is evident and where there is a low rate of completion in Basic Education at the appropriate age (TODOS PELA EDUCAÇÃO, 2018), more than just information is needed. Good quality training is needed.

Although online courses are more flexible and guarantee greater independence and freedom during the learning process, they do not necessarily create a motivational environment for student retention let alone the assimilation of the contents offered. The online modality with the advent of new communication technologies and also with the discussions and development of environments geared towards the metaverse can reach a level of interest and application hitherto unseen. For such an undertaking, it requires the training of a human resource: the teacher.

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