THE REFLECTIVE PORTFOLIO: CHALLENGES AND ADJUSTMENTS IN THE AGE OF ARTIFICIAL INTELLIGENCE

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ABSTRACT

The use of Artificial Intelligence (AI) in healthcare and medical education, from an academic and ethical perspective, has fostered changes in teaching and assessment practices. This article aims to report on the experience of the Family and Community Medicine module of the Medicine program at the Evangelical University of Goiás regarding the suitability of the reflective portfolio as a powerful element for provoking critical/reflective thinking and as an assessment tool. Given the challenges presented by the use of AI in the construction of pedagogical and assessment documents by medical students, we propose changing the format of the product, the frequency of delivery, and the assessment descriptors used. Artificial intelligence offers great advances in the medical field and in education and must be used responsibly and ethically. There is a need to rethink teaching practices so that active methodologies continue to stimulate the development of the skills necessary for medical training.

KEYWORDS: Education; Reflective Portfolio; Artificial Intelligence; Teaching Methods.

INTRODUCTION

Reflective portfolios are innovative tools used both as active teaching-learning strategies and as academic assessment instruments. Several studies highlight their potential and challenges, which have evolved with the growing use of technology in the context of human health and medical education.

Among the main potentialities of reflective portfolios, their capacity to serve as a critical-reflective instrument stands out, providing students with a space for expression that contrasts with traditional education, marked by an emphasis on rationality (MAIA; STRUCHINER, 2016; RODRIGUES, M.P et al., 2024). This space for expression offers students the opportunity to recognize their learning as meaningful, integrating previous experiences with new ones.

The Family and Community Medicine (MFC) module is transversal in the curriculum of the Medicine program at UniEVANGÉLICA. In this module, students participate in practices in health and in the development of community intervention projects. Reflective portfolios are used as part of the MFC module assessment from the 1st to the 8th period of the program. The construction of these portfolios by students is guided by a Term of Reference, which establishes its concept and objectives,

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in addition to clarifying the evaluation criteria. Through this instrument, students are invited to critically reflect on their educational trajectory.

The growing participation of artificial intelligence (AI) in healthcare solutions has prompted the education sector to reflect on the integration of these tools in the educational process and in the assessment of students' learning. Teaching and assessment strategies need to align with the new demands of the healthcare sector, which benefits from the use of these technologies (PERES, 2023; NASCIMENTO, 2024). In this context, it is essential to understand the potential and limitations of using AI in healthcare education, as well as to adapt teaching and learning processes.

This report aims to present the adaptations made to the Reflective Portfolio instrument, within the scope of the Family and Community Medicine module, from the 1st to the 8th period of the Medicine program at UniEVANGÉLICA, in response to emerging demands in health education, including the use of artificial intelligence.

EXPERIENCE REPORT

The reflective portfolio used in the Family and Community Medicine (MFC) module is an important participatory management tool for academics. Over time, it has undergone several changes from its initial model, adapting to emerging demands, such as in the context of the pandemic. Until the beginning of 2024, the delivery format remained as a written document.

Starting in 2022, with the increased use of artificial intelligence, there was a greater tendency to produce portfolios with a descriptive focus, to the detriment of reflection. This pattern prioritized theoretical aspects, neglecting the articulation between theory and practice, in addition to presenting inconsistencies between the written texts and the experiences lived by the students.

With the aim of reformulating the Portfolio Reference Term, a working group was created, composed of four teachers representing the 1st, 2nd, 3rd, 4th, 6th, and 8th periods. After a theoretical review, the group held a face-to-face meeting to develop the new proposal for the instrument, which was subsequently approved by the entire teaching staff of the module. As a result, there were changes to the descriptors used in the Terms of Reference, as well as to the frequency and format of portfolio submission.

The new proposal provides for the delivery of two products in video format: a partial one, to be delivered halfway through the module, and a final one, which consists of editing the partial video, contemplating the reframing of the student's perceptions throughout the training course. The descriptors used are listed below (Table 1 and Table 2).

Table 1 – Descriptors of the Terms of Reference for the Partial Reflective Portfolio. UniEVANGÉLICA Medicine Course, 2024.

Descriptors and Evaluation Criteria

Item	Partial Portfolio Descriptor	Guiding questions
1	Personal history	• Who am I? Where did I come from? Where am I going?
2	Knowledge/Previous experiences	• What personal knowledge and experiences do I have that relate to the theme of the module I am taking?
3	Description of the field of practice and professionals involved	• What is the field of practice and which health professionals are involved in these activities?
4	Expectations regarding knowledge building, as well as attitudinal and procedural skills developed	• What are my expectations? What attitudinal and procedural skills do I hope to develop?

Source: Medicine Course – UniEVANGÉLICA (2024).

Table 2 – Descriptors of the Final Reflective Portfolio Terms of Reference. UniEVANGÉLICA Medicine Course, 2024.

Descriptors and Evaluation Criteria		
Item	Final Portfolio Descriptor	Guiding Questions
1	Theoretical and practical reflection on situations experienced in the field that relate to the theoretical content of the semester.	• What situations experienced in the field relate to the theoretical content of the semester and contributed to my academic training?
2	Group learning	• Did I participate in any teamwork in which I needed to develop teamwork skills such as communication, proactivity, empathy, responsibility, resilience, and conflict mediation? (Also describe your feelings and impressions.)
3	Conclusion	• What did I learn overall, what challenges did I face, and what strategies did I use to overcome them?

Source: Medicine Course – UniEVANGÉLICA (2024).

The products highlighted reports on 1) the role of the university in social transformation, 2) interdisciplinarity, 3) interprofessionality, and 4) practice aligned with local health needs.

In addition, the change in the frequency of document delivery allowed for more effective monitoring of the learning process by teachers, providing more personalized feedback. This was possible thanks to the teacher's greater familiarity with the student and the verification of consistency between the reports and the practical experiences.

DISCUSSION

The portfolio is characterized as an active methodology that seeks to promote reflection, connecting new academic experiences with students' previous experiences (MAIA et al., 2016). It stimulates reflective capacity and offers the opportunity to integrate theory and practice (MAIA; STRUCHINER, 2016; SANTOS et al., 2020; RODRIGUES et al., 2024). In addition to developing

reflection, the portfolio allows students to understand the skills necessary to work in the Unified Health System (SUS) (FASSINA; MENDES; PEZZATO, 2021).

However, there are challenges, such as the need to encourage continuous reflection. It is common for portfolios to favor descriptions of activities rather than reflective analysis (FASSINA; MENDES; PEZZATO, 2021), and for academics to have difficulty recording their impressions consistently (MAIA et al., 2016). As an assessment tool, portfolios have the potential to reframe practices and perceptions, provided that there is more than one feedback from teachers throughout the process (FASSINA; MENDES; PEZZATO, 2021; RODRIGUES et al., 2024), and that there are guiding documents that clarify the structure of the instrument and the evaluation criteria in a clear and standardized manner among teachers (SANTOS et al., 2021; RODRIGUES et al., 2024).

Artificial intelligence (AI) has become increasingly present in health interventions and everyday academic life. This has led the academic community to discuss the ethical implications of using AI in knowledge production and academic authorship (FARDIM; GONÇALVES; TRIBST, 2023; PERES, 2023).

According to Peres (2023), the use of AI should be analyzed from three perspectives: technological, academic, and ethical. From an academic and ethical point of view, it is important to consider the rapid and widespread availability of this technology, which leads us to assess the potential for its incorporation into the daily lives of universities by students, teachers, researchers, and knowledge disseminators, as well as its impacts. Given the growing demand for productivity, it is necessary to reflect on the implications that the facilities provided by AI may have on the integrity of academic work.

The complex interactions between technology and education have raised questions about the use of AI in the educational context for pedagogical purposes. The prohibition of its use, as has been observed, does not contribute to pedagogy, and the premises that were valid for the analog era are no longer sufficient to address the current educational landscape (NASCIMENTO, 2024).

CONCLUSION

The demands in the health sector and the contributions of technology in this scenario are driving changes in pedagogical practices in education. Given this scenario, it is necessary to understand the responsible and ethical use of AI in the construction of academic documents.

For the reflective portfolio to continue to be an innovative tool for meaningful learning and student assessment, it must have clear reflection and assessment criteria that meet learning objectives. It is also necessary for this reflection to permeate the entire module, with more frequent teacher feedback, in order to allow for the reframing of practices and perceptions.

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