

# Exploring the pros and cons of online courses for physiotherapists – a theoretical study

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## Abstract

Physiotherapy, as a constantly evolving discipline, requires professionals to continually update their knowledge base to enhance patient care. To facilitate this growth, lifelong learning through supplementary educational courses plays a crucial role. The flexible online education has opened new opportunities for adult learners, including physiotherapists, to pursue further education while managing their daily commitments. This paper examines the conceptual framework of online learning in the context of physiotherapy education. It explores the advantages and disadvantages of online courses compared to traditional classroom methods. Online education is classified into three primary types: synchronous, asynchronous, and blended or hybrid courses. Synchronous courses involve real-time interaction with teachers, while asynchronous courses allow learners to access materials at their own convenience. Blended or hybrid courses combine online learning with face-to-face instruction. Advantages of online courses include accessibility, flexibility, cost-effectiveness, diverse learning resources, and the opportunity to build a global professional network. On the other hand, online courses lack continuous communication and interaction between teachers and learners, potentially hindering the learning experience. Learners must possess strong digital skills and self-study capabilities to succeed in online education.

The study concludes that the choice between traditional and online education depends on specific course objectives and participant expectations. Regardless of the mode of education, the active participation and engagement of learners are crucial for professional success. As the field of physiotherapy education continues to evolve, ongoing research and innovation are vital to improve the overall learning experience and ensure optimal outcomes for lifelong learners in the healthcare field.

## Keywords

- physiotherapy
- online education
- synchronous learning
- asynchronous learning
- blended learning

## Contribution

A – the preparation of the research project  
B – the assembly of data for the research undertaken  
C – the conducting of statistical analysis  
D – interpretation of results  
E – manuscript preparation  
F – literature review  
G – revising the manuscript

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### Conflict of interest

None declared.

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## Introduction

Physiotherapy, as a dynamic discipline, undergoes perpetual development, wherein novel investigations, methodologies, and technologies arise with frequency.<sup>1</sup> The expectations of society demand that professionals in this field persistently broaden their knowledge base, acquaint themselves with emerging procedures and therapies, and diligently enhance patient care.<sup>2</sup> To facilitate this growth, supplementary educational courses afford physiotherapists the chance to engage in lifelong learning, enabling them to remain well-informed about the most recent advancements in their field. This ongoing education serves as a catalyst for augmenting their proficiency and expertise, thus guaranteeing optimal care provision to their patients.<sup>3</sup> In today's fast-paced world, the demands of adult life often make it challenging to pursue further education. Juggling work responsibilities, family commitments, and personal obligations can leave little time for traditional classroom learning. However, the rise of flexible online education systems has opened new opportunities for adult learners to continue their education while managing their everyday lives.

## Conceptual framework for online learning

In the aftermath of the COVID-19 pandemic, considerable scholarly attention has been devoted to the examination of online education, encompassing an extensive range of investigations pertaining to its merits and drawbacks.<sup>4-9</sup> Nonetheless, limited scholarly inquiry has been directed towards assessing the efficacy of professional courses aimed at enhancing the knowledge of individuals within specialized fields. Health care including physiotherapy education has traditionally relied on in-person lectures, workshops, and clinical training. However, the emergence of online education has revolutionized the learning landscape, offering flexibility, accessibility, and interactivity.

Teaching and learning through electronic media are not inherently better or worse than traditional classroom methods, but rather offers a different experience for both teachers and learners. It brings forth certain challenges that can be more difficult, as well as certain advantages that can be easier to achieve compared to a traditional classroom setting.<sup>10</sup>

Today, online courses refer to educational programs or classes that are primarily delivered over the internet. They cover a wide range of subjects and are offered

by various institutions, including universities, colleges, private companies, and online learning platforms.

## Classification of online education

The format of online courses can vary. Some courses are entirely self-guided, allowing learners to access pre-recorded lectures or materials at any time. Other courses may include live sessions or webinars where students can interact with instructors and fellow learners in real-time.

Traditional education refers to the conventional methods and practices of teaching and learning that have been followed for many years. It typically involves a structured and standardized approach to education, characterized by a physical classroom setting, face-to-face interaction between teachers and learners, and a prescribed curriculum. In this format, both the teacher and the learner are physically present in the classroom at the time of the content delivery, so presence from both sides is required. In this type of education, learners are evaluated exclusively by teachers, who represent their main source of information, and the quality of learning is strongly dependent on them, however teacher can use several e-learning tools such as PowerPoint slides, video materials, internet supported websites, interactive quizzes (Kahoot, Quizizz, etc.).<sup>11</sup>

While traditional education has been the dominant form of education for centuries, there has been a growing recognition of the need for innovation and adaptation to meet the changing needs of learners in the modern world. As a result, alternative educational approaches such as online learning and blended learning have gained popularity in recent years. Until now, physiotherapy education has predominantly adhered to traditional education, primarily due to the considerable emphasis on practical classes.

Online learning refers to a form of education where teaching and learning activities take place primarily through digital platforms and the Internet. It is a mode of education that enables learners to access educational materials, interact with instructors and peers, and complete assignments remotely, without the need for physical presence in a traditional classroom setting.

Online courses can be categorized into three main types: synchronous, asynchronous, and blended or hybrid, depending on their format or delivery method. Negash and Wilcox differentiated the blended/hybrid form in terms of synchronicity and asynchronicity.<sup>12</sup> However, for simplicity, this form has not been further subdivided.

**Synchronous online courses:** These courses are conducted in real-time, where learners and teachers interact simultaneously. Synchronous online courses typically involve live lectures, discussions, and virtual classrooms where students can ask questions, participate in group activities, and receive immediate feedback. These courses follow a set schedule, and students are expected to be online at specific times to attend lectures and participate in discussions. Video conferencing tools, chat rooms, and collaboration platforms are commonly used in synchronous online courses.<sup>12,13</sup>

**Asynchronous online courses:** These courses do not require learners and teachers to be online at the same time. Instead, course materials, including lectures, readings, assignments, and discussions, are made available online, and learners can access them at their convenience. Asynchronous online courses offer flexibility, allowing learners to learn at their own pace and fit their studies around other commitments. Learners can engage with course materials, complete assignments, and participate in online discussions within specified deadlines. Communication with teachers and fellow learners usually takes place through email, discussion boards, and other online platforms.<sup>14,15</sup>

**Blended or hybrid courses:** Blended or hybrid courses combine online learning with traditional face-to-face instruction. In these courses, a portion of the content is delivered online, while other components, such as labs, discussions, or exams, are conducted in person. This format provides a balance between the convenience of online learning and the benefits of in-person interactions. It is particularly useful for learners that require hands-on practical work or face-to-face discussions.<sup>16,17</sup>

It's worth noting that these are not the only types of online courses available, and different institutions or platforms may use variations or combinations of these formats to suit their specific educational goals.

By examining the advantages, disadvantages, and critical factors involved in online education, this study aims to provide a comprehensive understanding of this educational approach.

## Methods

This theoretical research was conducted within the framework of the ERASMUS+ KA220-HED-Cooperation Partnerships in Higher Education as a part of a project MOV-E – Development of Intercultural Communication Skills in Physiotherapy Practice through an E-learning Course on Movement Analysis and Therapy.

The theoretical assumptions are supported by literature. The literature was searched through Scholar, PubMed, Scopus, Science Direct using the following keywords, 'physiotherapy', 'health professionals', 'conventional/ traditional education/ learning', 'online education/ learning', 'synchronous/ asynchronous education/ learning', 'blended/ hybrid education/ learning', 'advantages/ disadvantages'. The results were presented in a narrative format. Advantages and disadvantages were identified and described, and the available information was interrogated to find ways in which the education form could be best addressed. The identified literature was written between 1999 and 2021, most of them in 2020 (Table 1).

## Theoretical approach

For adult healthcare experts, including physiotherapists, learning in a traditional education system may seem impractical due to rigid schedules, fixed locations, and time-consuming commuting. Fortunately, online learning platforms offer a convenient and adaptable alternative, allowing individuals to learn at their own pace and from the comfort of their own home. However, alongside the advantages, there are also disadvantages. The following section describes the different forms of education with their pros and cons.

## Advantages of online courses

Accessibility and flexibility are the main advantages of online courses. They can be accessed from anywhere in the world, eliminating the need for learners to relocate or commute to a physical campus. Many online courses offer a self-paced learning model, allowing learners to study at their own speed and convenience. This flexibility is particularly beneficial for individuals with busy schedules, full-time jobs, or family commitments, as they can balance their studies with other obligations.<sup>18</sup>

Cost-effectiveness is also an important aspect of choosing online courses. Online courses often have lower tuition fees compared to traditional in-person courses. This is because online education eliminates the need for physical infrastructure, and learners can save on commuting or relocation expenses. They can study from the comfort of their own homes, eliminating the need to travel to a physical location. Additionally, many online courses offer digital learning materials, which can be more affordable than traditional textbooks and printed resources.<sup>19</sup>

Self-paced learning allows students to spend more time on challenging topics or move quickly through familiar material, tailoring the learning experience to their individual preferences. It allows learners to progress at a rate that suits their abilities, potentially finishing the course ahead of schedule.<sup>20</sup>

Online courses offer diverse learning resources such as videos, audio clips, interactive modules, and simulations, making the learning experience more engaging and helping learners understand complex concepts better. E-books and digital textbooks can be easily accessed from anywhere with an internet connection. Online courses can also easily integrate external resources and links to reputable websites, articles, research papers, and other valuable sources of information, enriching the learning experience.<sup>21</sup>

Additionally, learners can build a global professional network by interacting with experts and peers worldwide, depending on the regional or international focus of the course. When evaluating online courses in terms of their format, it is important to consider what the learner expects.

Asynchronous courses offer learners the freedom to access course materials and complete assignments at their convenience. In this learning styles, learners can choose the best method to consume the content, such as reading, watching videos, or listening to audio, and can progress through the material at their own speed.<sup>22</sup> However, some learners prefer real-time interaction with the teacher, with fixed schedule that can help them stay disciplined and focused on their studies. Synchronous learning style allows learners ask questions and seek clarifications from the teacher during the live sessions, leading to a better understanding of the material.<sup>23</sup>

Blended/ hybrid learning synthesizes the advantages of both traditional learning and e-learning.<sup>17</sup> The research has shown that blended learning had a significantly positive effect on knowledge acquisition, with blended learning learners showing better performance than those in traditional learning. The flexibility and access to electronic materials in blended learning might have contributed to this positive effect. The overall conclusion supported previous findings and confirmed that blended learning was more effective in enhancing learning outcomes in health professions.<sup>24</sup>

One important point to note, which has been drawn to our attention in previous studies, is that the participation in the learning process is more important for academic success than the way in which the material is delivered.<sup>25</sup> Sweetman's study offers useful suggestions for that.<sup>26</sup>

## Disadvantages of online courses

Online courses lack certain important aspects of traditional face-to-face education. They don't offer continuous communication and interaction between the teacher and learners and fail to adapt to the individual needs of each learner. There is a significant gap or disconnect between the teacher and learners, making the learning experience less desirable.<sup>27</sup> Learners are less likely to concentrate and understand what they are doing.<sup>11</sup> The teacher does not get immediate feedback if learners do not understand the material or misunderstand it and struggles to follow the progress and activities of the course participants, potentially unlimited in size.<sup>28</sup> Also, learners perceived diffuse relationships with their peers and were less likely to experience social support in online learning settings compared to traditional settings.<sup>29</sup> Additionally, although asynchronous teaching can enable learners to work self-paced and independently of time and place, not all learners are equipped with the necessary strategies to benefit from this potential advantage.<sup>22</sup> Learning at home, especially in asynchronous contexts, requires more self-study skills to stay on track, including enough motivation and will to follow learning goals.<sup>30</sup> Moreover, learners must be equipped with strong digital skills to successfully complete the tasks.<sup>31</sup> It should be mentioned that cultural and time zone disparities can pose a challenge in synchronous interactions, especially in international settings.

## Conclusions

Physiotherapists must not be content with the knowledge they acquire during their initial training; instead, they must continually seek opportunities to learn and expand their expertise. This ongoing pursuit of knowledge is essential for their professional growth, and they should actively seek out suitable training opportunities to achieve this goal. This study undertook a comparison between traditional and online education, aiming to assess and describe the structure of continuous education courses along with their pros and cons. The findings emphasized that there is no universally superior method, as the choice depends on the specific objectives of the course and the expectations of the participants. The participation and engagement of learners in the learning process remain critical factors for professional success, regardless of the mode of education. The success of learning relies more on the learner's attitude than the specific type of course they

**Table 1.** Advantages and disadvantages of online courses

Publication describing ADVANTAGES of online courses	
[18] Regmi, et al., 2020	accessible resources irrespective of location and time; significant cost, and time savings; fosters self-directed learning and flexibility
[19] Maloney et al., 2012	lower tuition fees, as no physical infrastructure; reduced commuting expenses; expenses of digital learning materials favourable to traditional resources
[20] Steed, 1999	students gain a sense of autonomy and responsibility for their learning journey, fostering a more self-directed approach to education
[21] Anderson, 2008	a variety of engaging resources (videos, interactive modules, and simulations) for better understanding; accessible from anywhere, digital materials enhance flexibility; integration with external sources enriches the learning experience
[22] van der Keylen et al., 2020	asynchronous courses provide flexibility to engage with course content and fulfil assignments at their own pace.
[24] Vallée et al., 2020	blended learning had a significantly positive effect on knowledge acquisition; was more effective in enhancing learning outcomes in health professions
[25] Nieuwoudt, 2020	active participation and interaction enhance learning; academic success correlates with online hours, emphasizing the need for diverse activities
Publication describing DISADVANTAGES of online courses	
[22] van der Keylen et al., 2020	even though asynchronous teaching offers the flexibility for learners to progress at their own pace and from any location; not all learners possess the essential strategies to fully leverage this potential benefit.
[23] Blau et al., 2017	in asynchronous courses no real-time interaction with the teacher; it does not allow learners ask questions and seek clarifications from the teacher during the live sessions
[27] Harrison, 2021	online courses lack consistent teacher-learner communication; fail to adapt to individual learning needs; create a perceived gap between teacher and learner, which detracts from the overall learning experience.
[11] Kemp et al, 2014	students would prefer to do the written assignments online but participate in the debate in person
[28] Hernández-García et al., 2015	no feedback when learners encounter difficulty or misunderstand the material; keeping track of the progress and activities of course participants pose a potential struggle
[29] Bedenlier et al, 2021	less social support and therefore learners are less willing to engage in social relationships
[30] Hartnett et al., 2015	independent and self-paced learning requires strong self-teaching skills; learners must be motivated and committed to stick to their learning goals
[31] Kim et al., 2019	learners need robust digital skills to effectively accomplish their tasks

undertake. As the landscape of education continues to evolve, ongoing research and innovation are vital to enhancing the overall learning experience and ensuring the best possible outcomes for learners in the field of physiotherapy and beyond.

The physiotherapist should carefully assess the advantages and disadvantages of the various training options available, to determine which ones best suit their individual learning needs. It is essential for them to personally evaluate the different approaches and select the most appropriate ones for mastering the material effectively.

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