

y de las sinergias que sigamos estableciendo con entidades relevantes para la fisioterapia como la Asociación Española de Fisioterapeutas, entre otros.

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INNOVATION IN PHYSIOTHERAPY EDUCATION-GUIDING PRINCIPLES

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Abstract: A common question in physiotherapy education is "what are the innovations in education?" To innovate, we need different ways of thinking. Innovation is the implementation of doing something different than what we regularly do, to improve services. Sometimes, innovation also includes revising if we are doing what we say we are doing. An innovative action implemented today, will be obsolete in a short time, that is why we need to be able to continuously adjust. Therefore, recipes for innovation are not recommended. This article provides three principles to guide innovation adjusted to each different higher educational institution in physiotherapy education: 1) Adjust to the (continuous) paradigm shifts in society; 2) Focus on the beneficiary and 3) Apply the theories and models underlying contemporary learning and education. Next to these principles, some practical implications to follow the guiding principles for the current needs for innovation are provided. Aspects for innovation like: student-centered learning, connectivism theory, entrusted professional activities and enlarged scope of practice are highlighted. Innovation requires reflection on what are we doing and transformation in epistemological beliefs of physiotherapy and physiotherapy education from all stakeholders. Educators will need to do their self-transformation and stimulate the shift in students and professionals in practice.

Highlights

- *Innovation in physiotherapy education should follow three guiding principles:* 1) Adjust to the (continuous) paradigm shifts in society; 2) Focus on the beneficiary and 3) Apply the theories and models underlying contemporary learning and education.
- *Practical implications* to follow the guiding principles for the current needs for innovation, require the *application of new structures and methods in HEIs* student-centered learning, connectivism theory, entrusted professional activities and enlarged scope of practice are highlighted.
- Innovation requires reflection on what we are doing and *transformation in epistemological beliefs of physiotherapy and physiotherapy education from all stakeholders*. Educators will need to do their self-transformation and stimulate the shift in students and professionals in practice.

Introduction: Higher Education plays a fundamental role in preparing professionals for the job market. For this, educational structures and concepts are demanded to constantly update to the requirements of society, profession-oriented scientific and technological developments and of global developments (European Commission). We are experiencing times of rapid change, to which society, and thus education has to anticipate at the same pace. This leads to the need of innovation and frequently the question is "what are the innovations in education? However, these questions are usually related to methods instead of ways of thinking which is the underlying concept of innovation. In this article we will focus on Innovation in Physiotherapy Education.

Innovation is in fact, a process of experimentation, that results from co-creation instead of individual initiatives. It requires the combination of different ideas or ways of thinking, the transference of others and the capacity to act differently. To innovate, we do need enter new thinking paradigms and apply correspondent methods. Sometimes, innovation also includes revising if we are doing what we say we are doing. For example, most programmes are structured as a competency-based curriculum, which represents a way of thinking. However, what we see are fragmented modules of education and knowledge assessment. We all know about the importance of student-centered learning (another way of thinking), while most educational strategies are teacher-centered. An innovative action implemented today, will be obsolete in a short time, therefore, we need continuous adjustments.

Therefore, instead of a list of innovative strategies in physiotherapy education, this article provides three principles to guide innovation and some practical implications to follow the guiding principles for the current needs for innovation.

Guiding Principles to Innovate in Physiotherapy Education (Fig. 1)

Adjust to (continuous) paradigm shifts in society

Currently, the process of globalisation, the advances in technology, the increased mobility across countries and the current economical and social challenges, require professionals to act according to these new realities. These paradigm shifts have direct impact in how we educate current students and future professionals.

Figura 1. Practical implications to follow the guiding principles for the current needs for innovation.

<p>1. Adjust to (continuous) paradigm shifts in society</p> <p>Adjustments for the new demographic changes and other needs in 21st century</p> <ul style="list-style-type: none"> • Positive Health Focus – “the ability to adapt and self-manage in the face of social, physical and emotional challenges”⁷, seems to offer a complementary alternative for the current reactive and problem-based perspective on health in society and of its care providers like physiotherapists. This concept should be integrated in physiotherapy programmes. • Physical activity and healthy life styles – in the context of healthy ageing but also in the area of mental health and well-being, physical activity is one of the major interventions with efficacy, at the same level and importance of other physiotherapy approaches. Therefore, should be mandatory and gain more weight in any physiotherapy curriculum. • Higher value to ethical and human values – ethics is present in the majority of curriculums, usually theoretical and not contextualized in the actual physiotherapy scope of practice and new societal challenges and most of the time with no meaning for students. This topic should be addressed in a contextualized way for physiotherapy and societal specificities. • Mental health and capacity strategies for resilience and self-management – these topics should be mandatory in curricula to provide physiotherapists competences to manage the “health problems” of the 21st century (for them and their clients). <p>Physiotherapy education and process centered on the person or community</p> <ul style="list-style-type: none"> • Given the individual or community ecosystem, learning should promote a vision of context and the different dimensions that influence well-being. This means, globally, learning experiences where movement and well-being are central, independently of the “medical” condition. • Considering the diverse communities, intercultural competences, which entail: cultures, health beliefs, communication and reasoning models, are also mandatory <p>Interprofessional intervention</p> <ul style="list-style-type: none"> • A scope of practice to more interprofessional contexts, requires learning competences of professional boundaries including direct access and cross boundaries where professional positioning should gain more weight. <p>Management and leadership in the context of social innovation</p> <ul style="list-style-type: none"> • Besides clinical management, development of social innovation, with innovative business models in leadership and entrepreneurship are crucial. <p>Technology and physiotherapy</p> <ul style="list-style-type: none"> • Educational programmes should include technological strategies for client data management, assessment, treatment and coaching interventions. This will increase the efficacy of services, the human relation and time for critical reflection.
<p>2. Focus on the beneficiary</p> <ul style="list-style-type: none"> • Student-centred learning – “student-centred learning cannot be reduced to a set of techniques but should question the way both teachers and students understand their relationship and the process of learning”⁸. This represents a more individualized learning path instead of “one size fits all”. Under this concept, education didactics should adopt dynamic strategies where students are in the lead of their education. • Active learning strategies directed to centennials – less theoretical classes or practical classes teacher-centered <ul style="list-style-type: none"> ◦ Hybrid strategies - Blended-Learning <ul style="list-style-type: none"> • Flipped classroom • Virtual training • Shared learn goals • Personalized blended learning • Collective intelligence • Challenge based-learning • Flexible learning • Transformative learning
<p>3. Apply the theories and models underlying contemporary learning and education</p> <p>Integrated teaching and curricula</p> <ul style="list-style-type: none"> • Bi-directional learning – curricular models based on constructivism are designed from theory to practice, where for example anatomy is taught as a pre-requisite for understanding movement models and disturbances (lectures usually centred in the teacher and books). However, it’s known from cognitive science that we also learn from practice to theory (connectivism theory). Therefore, the traditional curricular structure with individual disciplines, should be transformed to integrated modules where different disciplines and contexts come together to achieve programme learning outcomes and professional competences. Moreover, learning can also be done from general to specific specializations. • More real life and less classroom since day one – the current average of 20% of practice education is no longer sufficient to the paradigm shift. The exposure to real life since day one in a systematic continuous manner, is preferable to the traditional structures of long clinical placements only at the end phase of the programme. This will promote agility and critical reflection contextualized in practice. • Practice settings diversity – physiotherapy practice is no longer only associated with hospitals or clinics, therefore practice education should be expanded to all different settings where physiotherapists can have a role nowadays like: community organisations, local governments, policy organisations among others. • Integrative modules or projects to promote a broader relation among topics and complexity understanding <ul style="list-style-type: none"> ◦ Capstone projects⁹ - is a multifaceted method that serves as an integrative academic and intellectual experience for students, combining different disciplines applied in a real context. It represents a critical transition between school and work, involving usually the partnership with industry. Require student’s analytical decision-making and critical thinking skills to address complex problems under a spectrum of social, environmental, and economic constraints. ◦ Entrusted Professional Activities¹⁰ – units of professional activities that represent trustfully what professional do in their daily activities. <p>Competences based education and assessment</p> <ul style="list-style-type: none"> • Programmes should promote the achievement of the professional competences firstly directed by the World Confederation of Physiotherapy and secondly endorsed by the national association of each country. A matrix analysis facilitates this alignment. • Assessment strategies should be adjusted to the same type of curriculum and learning strategies, centered on programme learning outcomes and professional competences.

From the health care perspective these changes are translated in services efficiency, increased life expectancy,

access to scientific information for informed based-practice. On the other hand, we face also some challenges: aged population, increased non-communicable diseases and co-morbidities associated to aging and non-healthy habits, stress, nutrition and pollution.

From the societal perspective we have agile access to information and a growth in complexity and diversity of the living context, demanding more societal and environmental responsibility.

Therefore, we need to expand the body of knowledge to correspond to the new scope of practice and competences, adequate to the new demands:

- Healthy ageing needs for a more sustainable society, entailing the community in general aiming for children, youth and adults with healthier life styles (physical activity, nutrition, environment sustainability).
- Aged population with co-morbidities integrated in society and not just in clinical context, meaning citizens who wish to maintain their quality of life and functionality with co-existing health conditions, stressing the importance of the positive health concept.
- Working population with high stress levels demanding attention to emotional and mental dimensions to maintain well-being.
- Globalisation and emergence of new services demanding interprofessional skills, leadership and a resilient entrepreneurial attitude with cultural and ethical competences.
- Technology competences in intervention models and data management for optimization of practice.

These are just some of the more evident contemporary needs. However, educational programmes should anticipate future needs. This paradigm shift is already highlighted by David Nicholls¹ in his book “The End of Physiotherapy” and in the discussion within the World Health Organisation for health care in general, the World Confederation of Physiotherapy and many national Physiotherapy professional associations for physiotherapy specifically with impact in the new professional profiles.

The major changes relate with competences like: agility, creativity, adaptability and life-long learning within complex contexts, uncertain and emergent challenges (as environmental challenges for instance), co-creation, entrepreneurship, interprofessional collaboration and evidence informed practice¹.

Despite the existence of some new ways of thinking, the methods applied are still in the old perspective of physiotherapy needs and therefore innovation is limited.

Focus on the beneficiary

The younger generations (future professionals), the Centennials or Generation Z, are citizens with more flexibility; higher adaptability capacities; more responsible with their tasks and mission towards others; society and environment centered; digital and technologically literate; globally connected, multi-tasking capable; autonomous and self-learners; with a noticed reduced attention window but emotionally competent². This should be seen as an opportunity for HEIs and curricular design programmes.

The concept of student-centred learning dates from the 1930s³, however, its implementation is limited. Only a small percentage of higher educational institutes (HEIs) seem to use this approach in a systematic way. What

prevails is a more rigid educational structure, focused on institutional and teachers' priorities and approaches. This is a preoccupation as it ignores the latest scientific recommendations, not offering adequate models of education and ignores the characteristics of our current students.

Apply the theories and models underlying contemporary learning and education

The world became more complex and diverse, increasing the complexity of settings where physiotherapists need to enact. This demands agility for decision-making and performance in non-linear contexts where outcomes are not predictable and standardized procedures are not always the answer⁵. The current educational models, based on pre-defined and artificial and controlled contexts are not sufficient anymore to prepare professionals for the complexity and competences needed in the 21st century. This preparation is only possible when learning occurs in real life context⁶ demanding a combination between student-centred learning and practice centered learning which characterizes the concept learning in complexity. This practice is supported by the Connectivism Theory in complement to behaviorism and constructivism⁶.

Conclusion: The recommendations provided are to be adjusted to each HEI context. Innovation requires transformation in epistemological beliefs of physiotherapy and physiotherapy education from all stakeholders. Educators will need to do their self-transformation and stimulate the shift in students and professionals in practice. Countries with this type of adjustments show to be more innovative.

This article only touches the needs and trends for innovation. Specifiers on each topic are further developed within the European Network of Physiotherapy Education (ENPHE) working groups. These groups share, benchmark and define best practices. Aspects like adjustments in assessment methods, clinical reasoning, informed based practice, applied research and the transformative learning process for educators is currently on the agenda of the network.

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GRUPO DE TRABAJO DE EDUCACIÓN EN LA REGIÓN EUROPEA DE WORLD PHYSIOTHERAPY: PRESENTE Y FUTURO

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Resumen: La Región Europea de World Physiotherapy, se encuadra como una de las cinco regiones de World Physiotherapy, siendo esta última la organización que representa a la Fisioterapia a nivel mundial, con 125 organizaciones miembro de todo el mundo representando a unos 685.000 fisioterapeutas. La región europea está constituida por asociaciones profesionales de 37 países, miembros de la World Physiotherapy y que representan alrededor de 200.000 fisioterapeutas en Europa. Tiene su secretaría en Bruselas (Bélgica). El objetivo de este trabajo es mostrar el papel de la Región Europea en la defensa y avance de la fisioterapia y concretamente del grupo de trabajo de Educación, analizando la labor desarrollada hasta el momento y su proyección futura.

Para responder al objetivo se llevó a cabo un análisis de la página web de la región europea y de forma particular se exploró la sección de educación y el trabajo y documentos desarrollados por el grupo de Educación (Education Matters Working Group) de dicha organización.

Hay que destacar el trabajo desarrollado por los diferentes grupos de trabajo de la región Europea, elaborando documentos, infografías y webinar en los diferentes ámbitos de la profesión, destacando 9 documentos y 5 infografías del grupo de educación elaborados y actualizados hasta la asamblea general de 2022, y a partir de esta fecha y en virtud de los aprobado en la asamblea de este año, se desarrollarán documentos sobre educación clínica y actividades y acciones para promover la investigación en Fisioterapia, por parte de las organizaciones miembro.

Introducción: La Región Europea de World Physiotherapy, se encuadra como una de las cinco regiones de World Physiotherapy¹, siendo esta última la organización que representa a la Fisioterapia a nivel mundial, cuenta con 125 organizaciones nacionales miembro de todo el mundo y representa a unos 685.000 fisioterapeutas.

En el caso de la Región europea, es la voz de la Fisioterapia y fisioterapeutas ante las autoridades europeas y de la UE. Fue establecida en septiembre de 1998, y se