

Physiotherapist education framework



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Physiotherapist education framework

Physiotherapist education framework

Introduction

Physiotherapist education is a continuum of learning. It starts with the entry level physiotherapist education programme that permits entry to the profession, followed by developing and maintaining continued competence to practice. Physiotherapists' learning responds to the needs of clients in an ever-changing health and social care environment. Lifelong learning is essential for achieving and promoting excellence in physiotherapy and for progression through a career. This may include an extension of professional scope, specialisation, advanced practice, and the application of transferable professional meta-competencies such as: teaching, research, management, leadership, and advocacy.

The goal of physiotherapist education is to ensure the continuing development of physiotherapists who are competent and entitled to practise the profession, without limitation, and in accordance with the definition of physiotherapist practice within their individual countries. Physiotherapist education is the integration of theory, evidence, and experiential practice that continues throughout professional life.¹

Physiotherapist education facilitates the continuing intellectual, professional, and personal development of students and qualified physiotherapists,¹ who continuously apply their learning and use it to develop and improve their professional practice through a process of:



professional practice

where learning is integrated and applied to a dynamic context



application

of learning to theoretical, simulated, and practice activities and situations



reflection

on learning, performance, and experiences

At the time of publishing this document, the world has been facing the historic COVID-19 pandemic which has changed all aspects of life. In the higher education sector it forced a rapid shift to online education and challenged the traditional ways of post-secondary teaching, learning, and assessment. The pandemic has impacted physiotherapist education in multiple ways with practice education and the use of online learning being the most pressing ones. However, this rapid shift has also created opportunities to re-examine the foundations of professional education; to review the curriculum and the learning outcomes; and to look for the optimal teaching, learning, and assessment approaches to deliver more flexible programmes which maximise use of online technologies and maintain the quality of learning experiences. This new global situation has served to highlight the need for education which supports the development of physiotherapists who are adaptable and comfortable with change and uncertainty.

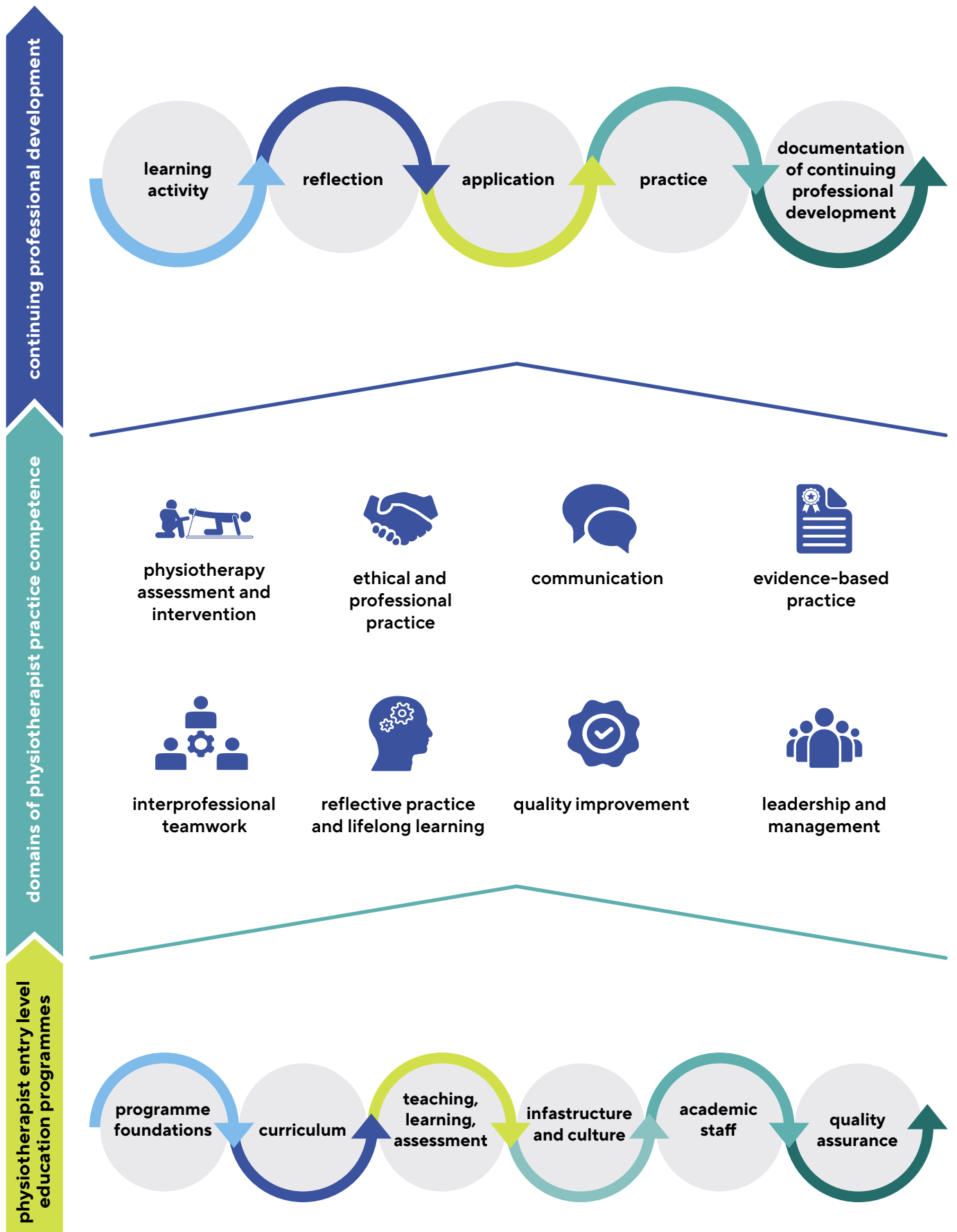
Physiotherapist education framework explained

In order to support the advancement of physiotherapist education, World Physiotherapy has prepared this document - the Physiotherapist education framework. The purpose of the Physiotherapist education framework (summarised in Figure 1) is to position components of physiotherapist education along the lifelong learning continuum as well as to provide guidance for physiotherapist entry level education and continuing professional development (CPD). The lifelong learning continuum, is also illustrated by the development of competence through a physiotherapist's advancement from novice to expert.²

Physiotherapist practice is continuously evolving and these changes should be reflected in competences, programme benchmarks, and standards. It is recognised that physiotherapist education is organised in diverse and complex contexts, characterised by uncertainty and constant change. Therefore, this document should be used as a guidance tool that is critically examined alongside the evidence on the needs, policies, and system characteristics that apply in a specific context.



Figure 1. Physiotherapist education framework



The Physiotherapist education framework is primarily based on World Physiotherapy’s policy statement on education which sets out expectations of physiotherapist entry level, and post-entry level, education.¹ The framework is a tool to support the implementation of the policy and integrates previously published World Physiotherapy education related guidelines.³⁻⁷ Physiotherapist education framework is informed by a number of relevant World Physiotherapy policies:

- Autonomy⁸
- Description of physiotherapy⁹
- Direct access and client self-referral¹⁰
- Diversity and inclusion¹¹
- Ethical responsibilities of physiotherapists and World Physiotherapy members¹²
- Evidence-based practice¹³
- Informed consent¹⁴
- Occupational health and safety of physiotherapists¹⁵
- Patients’/clients’ rights in physiotherapy¹⁶
- Physiotherapy records management¹⁷
- Quality of services¹⁸
- Relationships with other health professionals¹⁹
- Research²⁰
- Standards of physiotherapy practice²¹

This framework provides:



guidance on the expected competences for physiotherapist entry level education



guidance for delivery and quality assurance of physiotherapist entry level education



the benchmark against which entry level programmes may be assessed for comparison, either externally or by self-audit



guidance for delivery and expectations of continuing professional development

The document sets international expectations; different countries and education providers may be working at different speeds and levels towards these expectations.



How the document is structured

The document has three sections covering the three components of the Physiotherapist education framework:

1. Domains of physiotherapist practice competence
2. Physiotherapist entry level education programmes
3. Physiotherapist continuing professional development (CPD)

Section 1: Domains of physiotherapist practice competence describes the competence domains of core physiotherapy practice that student graduates of the entry level education programmes are expected to have upon the completion of the programme. These competence domains are also relevant for maintaining continued competence through continuing professional development.

Section 2: Physiotherapist entry level education programmes is the largest section describing six elements of a quality physiotherapist entry level education programme including programme foundations; curriculum; teaching, learning and assessment; infrastructure and culture; academic staff; and quality assurance.

Section 3: Physiotherapist continuing professional development (CPD) covers key aspects of CPD including formal and informal development, as well as steps in self-directed, lifelong learning in which all active physiotherapists engage to maintain continued competence. It provides information about ensuring CPD quality from both the provider and client perspectives.

How to use the Physiotherapist education framework

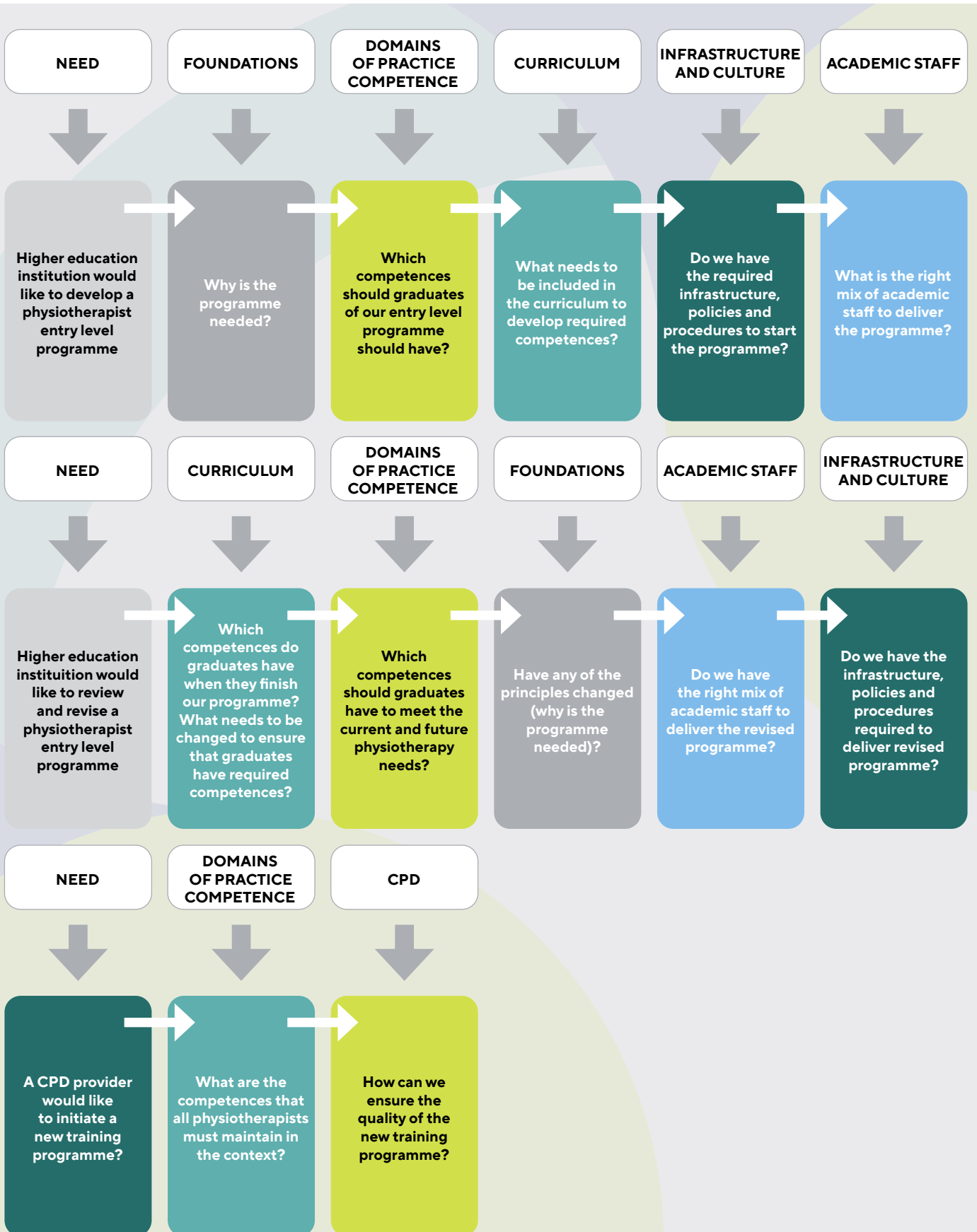
This document can be used to:

- assist physiotherapist entry level education providers in curriculum development that aims to meet international expectations
- guide stakeholders involved in the development and implementation of physiotherapist entry level education programmes
- empower member organisations, and potential member organisations, to develop a country specific description of physiotherapy and to advance the education of physiotherapists at a national level
- encourage monitoring and regulatory bodies to look for best practice in the quality assurance of education provision, from entry level education programmes through to CPD
- inform the development, implementation, and evaluation of continuing professional education that ensures the maintenance of acquired professional competence
- introduce competence-based physiotherapist education and inform curriculum content
- review an existing physiotherapist entry level education programme in relation to their graduates' competences
- support post-entry level education providers in the design and delivery of quality CPD

Member organisations of World Physiotherapy may also use the framework to facilitate discussions regarding physiotherapist entry level education with higher education institutions (HEIs), regulatory bodies, and other relevant stakeholders, in their own country/territory.

The document provides a baseline that can be adapted to reflect the country specific needs and the evolving roles of physiotherapists, set within a local educational, socio-political, cultural, economic, and regulatory context. However, this guidance document is neither intended to provide a full guide to physiotherapist entry level education nor a prescribed set of mandatory competences. Examples of potential uses of this document can be found in Figure 2 illustrating that each of the sections, and subsections, can be used as a starting point depending on the specific needs of the reader.

Figure 2. Possible journeys through the Physiotherapist education framework





Section 1: Domains of physiotherapist practice competence

Section 1: Domains of physiotherapist practice competence

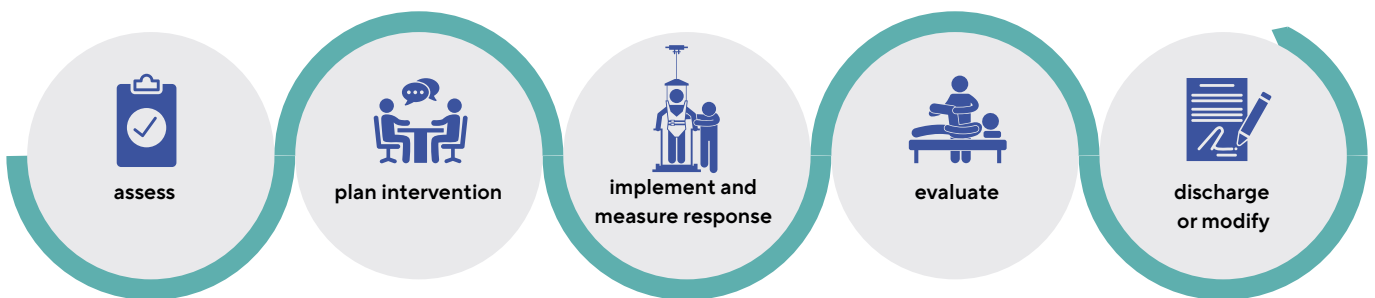
This section provides guidance on the expected competences for physiotherapist entry level education. It describes the competence domains of core physiotherapist practice that physiotherapists are expected to have acquired by the time of their graduation, as well as for practising physiotherapists to maintain through CPD.

Introduction

The process of physiotherapy (Figure 3) builds on World Physiotherapy’s policy statement: Description of physiotherapy⁹ and is described by a number of sequential steps that physiotherapists are qualified and professionally required to follow to achieve good outcomes for clients , including:

- **assess:** undertaking a comprehensive examination/assessment of their client’s needs (or needs of a client group) and evaluating the findings to make clinical judgments regarding their clients
- **plan:** formulating a diagnosis, prognosis, and intervention plan within their expertise and determining whether physiotherapy is applicable and whether their client needs to be referred to another professional
- **implement:** implementing a physiotherapist intervention and education programme in agreement and collaboration with the client, and measuring response
- **evaluate:** evaluating the outcomes of any interventions or education
- **modify:** modifying plans as required
- **discharge:** developing a discharge plan at the appropriate point in time when goals have been achieved or effectiveness is no longer evident

Figure 3. Physiotherapy process



In this document we use the term client, or clients, to refer to patients, clients, service users and populations.

Physiotherapists shall exercise their professional judgement to arrive at a diagnosis that will direct their physiotherapy interventions. The physiotherapist’s extensive scientific knowledge of the body structure and function, its movement needs and potential, and environmental and personal factors, are central to determining diagnosis and intervention strategies. Physiotherapy interventions are undertaken within an active functional rehabilitation approach, which enables optimal participation in everyday life. Physiotherapist practice is concerned with identifying and maximising quality of life and functional movement potential encompassing physical, psychological, emotional, and social wellbeing.

The focus of physiotherapist practice can be promotion, prevention, maintenance, intervention, rehabilitation, or a combination of these. Depending on the focus, physiotherapists can practice in various settings, for example: at the primary, secondary, or tertiary care level; on an inpatient or outpatient basis; in homes, schools, education institutions,

fitness clubs, sports centres, prisons, industry; and in both urban and rural communities. Some physiotherapists, upon graduation, go on to work in research or education. There is an emerging role that physiotherapists play in digital health that expands physiotherapy into digital practice.

Physiotherapists are autonomous, independent practitioners and are subject to complying with ethical principles.²² They are members of health service provider teams, which may operate interprofessionally. Physiotherapist practice is context specific and involves collaboration between the physiotherapist and a wide range of individuals relevant to the situation - they will bring their unique knowledge and set of skills to the situation. Physiotherapists can act as first contact practitioners and clients may seek direct services without referral from another health professional, as stated in World Physiotherapy's policy statement on direct access.¹⁰ Depending on the role, physiotherapist practice may also include responsibilities for leading, managing, teaching, researching, and policymaking.

Defining competence

There are conceptual and terminological inconsistencies in the literature when defining competence.^{23, 24} For the purposes of this guidance we define competence as 'the proven ability to use knowledge, skills, and personal, social and methodological abilities, in practice or study situations and in professional and personal development.'²⁵ Competence is linked to the measurable, durable, and trainable behaviours that contribute to the performance of activities, demonstrating whether a person is competent to perform activities to a defined standard. Activities are groups of time-limited, trainable and measurable tasks that draw on knowledge, skills, values and attitudes.²³

Furthermore, competence is the ability of a physiotherapist to practise safely and effectively in a range of contexts and situations of varying levels of complexity. The level of an individual physiotherapist's competence in any situation will be influenced by many factors. These factors include, but are not limited to, the physiotherapist's qualifications, clinical experience, professional development, and their ability to integrate knowledge, skills, attitudes, values, and judgements.^{25, 26} Practising physiotherapists must continue to safeguard their competence in the areas in which they practise, including the ongoing development of new competences over time that are essential to fulfil the requirements of their roles.



Eight unique domains are identified for physiotherapist practice competence that are grounded within World Physiotherapy’s policy statements. These are:



Each domain is further described as a set of activities that a competent physiotherapist must perform to a defined standard based on physiotherapy knowledge, skills, and abilities (Table 1).

Providers of physiotherapist entry level education programmes must ensure that their graduates are competent to practise within the given context, while aiming to maintain international standards and to facilitate the development and mobility of the physiotherapy global workforce.





Table 1. Domains of physiotherapist practice competence

DOMAIN	
1. Physiotherapy assessment and intervention	
Physiotherapists who meet World Physiotherapy expectations are able to:	
1.1	plan and conduct a structured, comprehensive client-centred assessment and physiotherapy examination of the client, or needs of a client group, including socio-economic, personal, and environmental factors, and screening for differential diagnosis
1.2	evaluate the findings from the assessment/examination to identify and prioritise client problems and negotiate achievable and measurable functional and clinical outcomes
1.3	formulate a diagnosis to guide physiotherapists in determining the prognosis and most appropriate, evidence-based intervention/education strategies for clients by using clinical reasoning, that results in the identification of existing or potential impairments, activity limitations, participation restrictions, environmental influences or abilities/disabilities
1.4	establish client-centred goals and develop an individualised plan of evidence-based intervention using a context specific, active, functional rehabilitation approach in full collaboration with the client/carers
1.5	safely and effectively implement physiotherapy interventions, making appropriate use of technologies to restore integrity of body systems essential to movement; to maximise function and recuperation; to minimise incapacity; and to enhance quality of life, physical and mental health, wellbeing, independent living and workability in individuals and groups with altered movement behaviours resulting from impairments, activity limitations, participatory restrictions or disabilities through: <ul style="list-style-type: none"> • therapeutic exercise • functional training in self-care and home management • functional training work, community, and leisure • manual therapy techniques (including mobilisation/manipulation) • prescription, application, and, as appropriate, fabrication of devices and equipment (assistive, adaptive, orthotic, protective, supportive, and prosthetic) • airway clearance techniques • integumentary repair and protection techniques • electrotherapeutic modalities • physical agents and mechanical modalities • client-related instruction • health promotion and prevention of impairments, activity limitations, participatory restrictions, and disabilities in individuals at risk of altered movement behaviours due to health, socio-economic, environmental, and lifestyle factors • modifying environmental, home and work access, and barriers to ensure full participation in one's societal roles
1.6	regularly monitor, measure, record, and evaluate the outcomes of intervention using valid and reliable measures and, if necessary, make modifications to the planned intervention

1.7	judge the need for referral or discharge if the diagnostic process reveals findings that are not within the scope of the physiotherapist's knowledge, experience or expertise; refer the client to another appropriate practitioner and facilitate transition from physiotherapy to the care of another professional; or discharge, securing optimal social participation for the client
1.8	deliver services in the most appropriate and safe setting (for example, clinic, community, home, school); via the most appropriate mode (for example, in person or digitally); considering the circumstances (for example, socio-economic status, family situation) and potential systemic barriers (for example, disability, gender, age, race, ethnicity, geographic location); and including whether a direct physical examination is required, and whether a client is able to receive care in a specific setting, or remotely

DOMAIN

2. Ethical and professional practice

Physiotherapists who meet World Physiotherapy expectations are able to:

2.1	comply with the laws and regulations governing the practice of physiotherapy as an autonomous profession, and the relevant statutory, ethical and professional codes, standards, guidelines and policies of their professional associations and regulatory bodies in the country in which they practise; and to report any observed unethical behaviours/practice by others - this includes digital practice, digital data protection and the use of social media
2.2	practise using a culturally-competent, person-centred approach with respect for all forms of inclusion, diversity, dignity, privacy, autonomy, and human rights of the client, or legal guardian, who is seeking services regardless of whether the services are provided in person or remotely
2.3	practise within their own scope of practice; provide honest, competent and accountable professional services; and recognise the limitations of their own competence and ensure to work within it; refuse to work outside of their own competence, if requested to do so; and to accept responsibility for the exercise of sound professional judgement
2.4	place the needs and interests of the client at the centre of their practice; provide fair, equitable, inclusive, and empowering quality services and ensure their own needs and interests as a physiotherapist do not compromise practice; charge and receive a just and fair level of remuneration for their services
2.5	obtain informed consent prior to intervention and respect the right of the client to refuse intervention
2.6	recognise clinical and environmental risk, manage risk responsibly and effectively, and advocate for the right of physiotherapists to work in a safe and healthy practice environment that assures their own health and safety as well as that of their clients
2.7	advocate for improved societal health and wellness of individuals, the general public, and society, emphasising the importance of physical activity and exercise and the facilitation of such activities, and for the inclusion of both the client's and physiotherapist's perspective in decision-making
2.8	engage actively in anti-corruption, global health, and human rights-based approaches

DOMAIN

3. Communication

Physiotherapists who meet World Physiotherapy expectations are able to:

3.1	communicate clearly, accurately, understandably, effectively in a culturally-competent manner to create trust and an appropriate environment for physiotherapy intervention, empowerment, and collaboration to enable good outcomes, both in person and when working remotely
3.2	maintain accurate, clear, and timely records of assessment, decision-making, interventions, and outcomes and share with other professionals as appropriate; coordinate communication and documentation in line with legal, national, and local requirements for record keeping
3.3	provide accurate and appropriate information about physiotherapy to clients, to other agencies and to the community
3.4	demonstrate reflective listening and negotiating skills to develop trust and to enhance relationships and outcomes with patients, clients, and other colleagues, adjusting approaches as required to meet the situation

DOMAIN

4. Evidence-based practice

Physiotherapists who meet World Physiotherapy expectations are able to:

4.1	Apply a critical understanding of the research literature and use the best available evidence and new knowledge to inform and adapt practice to ensure it is safe and effective
4.2	identify clear, focused questions arising from practice that may serve as stimuli for future research
4.3	contribute to professional practice through research according to recognised standards and ethical practices, and research dissemination, appreciating the inter-dependence of practice, research, and education within the profession

DOMAIN

5. Interprofessional teamwork

Physiotherapists who meet World Physiotherapy expectations are able to:

5.1	engage in respectful, collaborative practice within multidisciplinary and interprofessional teams to optimise measurable clinical outcomes and to promote a positive, individualised, client experience through the whole health and social care pathway; work within, and beyond, traditional professional boundaries (for example, skill sharing); collaborate with other health professionals and key stakeholders
5.2	work collaboratively with other members of multidisciplinary and interprofessional teams, and with clients, families, and caregivers to determine needs and to formulate goals for physiotherapy intervention
5.3	teach and mentor colleagues

DOMAIN**6. Reflective practice and lifelong learning****Physiotherapists who meet World Physiotherapy expectations are able to:**

- | | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1 | identify individual learning needs by assessing one's own practice against peers and benchmarks, and set realistic learning goals |
| 6.2 | construct and implement a personal development plan and engage in continuing professional development |
| 6.3 | reflect on practice and seek support where needed to improve and develop one's own personal and professional efficacy and effectiveness |
| 6.4 | identify learning needs related to the use of technology in physiotherapy including new diagnostic, intervention, communication, and documentation tools addressing privacy, security, data storage, technology troubleshooting, and adverse events management |

DOMAIN**7. Quality improvement****Physiotherapists who meet World Physiotherapy expectations are able to:**

- | | |
|-----|------------------------------------------------------------------------------------------------------------------------|
| 7.1 | participate in organisational data collection, interpretation, and analysis to measure quantity and quality of outputs |
| 7.2 | engage with, and initiate, service improvement initiatives, including acting on feedback from clients |
| 7.3 | utilise resources and technology efficiently to ensure their maximal impact on services |

DOMAIN**8. Leadership and management****Physiotherapists who meet World Physiotherapy expectations are able to:**

- | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.1 | lead effectively and be led by others, as appropriate, and proactively model best professional values, and ethical behaviours |
| 8.2 | manage the complexity of working autonomously, within professional competence and scope, and be responsive to organisational management structures in a dynamic healthcare environment |
| 8.3 | interact with administrative and governance structures to inform, develop, and/or implement appropriate health policies and strategies, and contribute to the planning and development of services which address the health needs of individuals and the community |
| 8.4 | provide for the ongoing growth and development of the profession and for the identification of the unique contribution of physiotherapy and its evolving scope of practice |
| 8.5 | develop strategies to manage ambiguity, uncertainty, change, and stress to develop resilience and to manage physical, emotional, and mental wellbeing |

It is recognised, and understood, that physiotherapist competences may be described in other ways in different countries, reflecting the context in which it is practised. Some approaches to physiotherapist competence are presented in Appendix 1, where domains of physiotherapist competences are mapped to different competence frameworks developed within countries of World Physiotherapy member organisations.

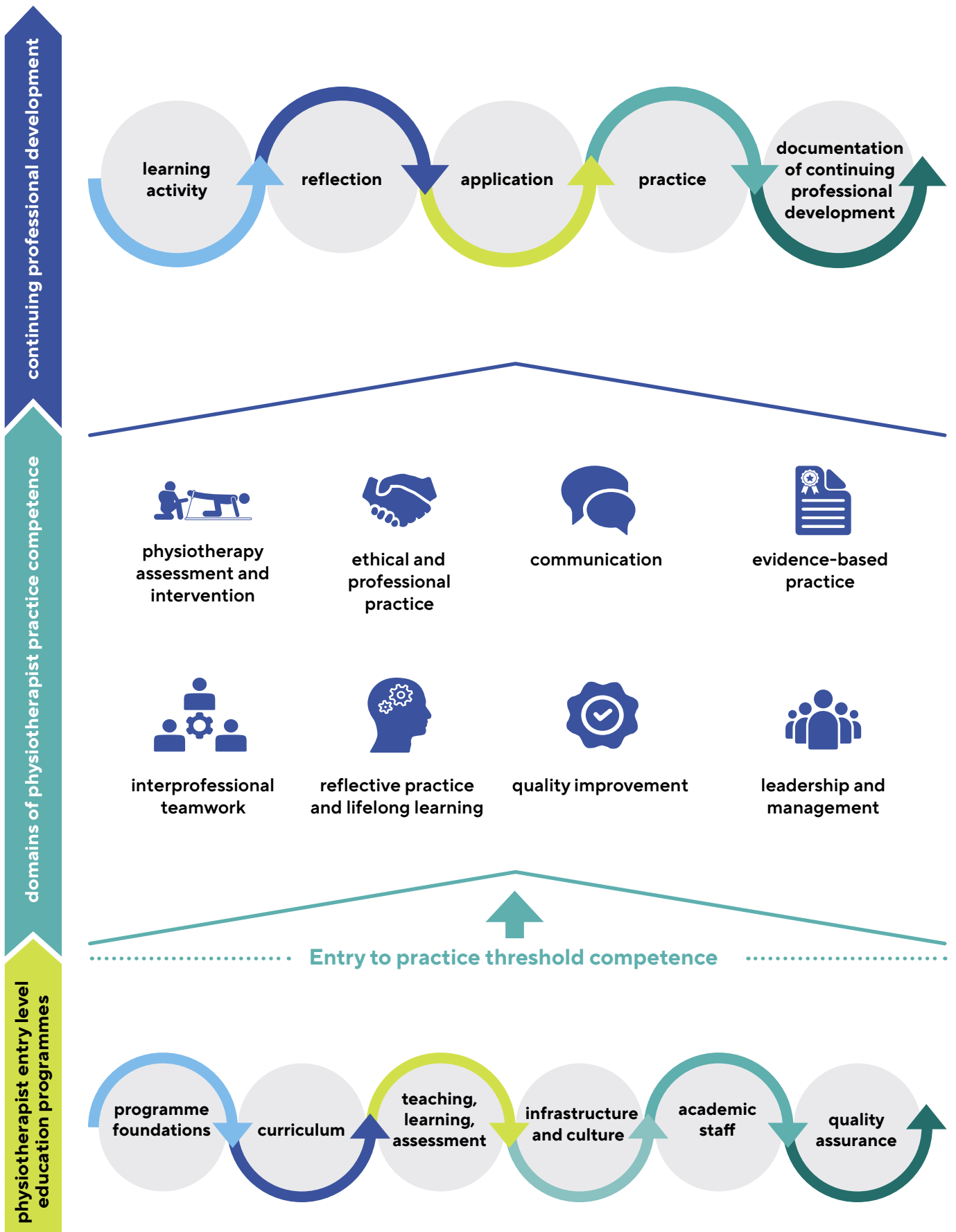
Entry to practice threshold

The description of the eight domains of physiotherapist practice competence (Table 1) sets expectations for practitioners, students, and educators, with the aim of helping them align practice and education with performance standards, both locally and internationally. Education, whether at the entry level or post-entry level, should be built around a specific purpose with clear outcomes which will articulate competences that successful students will achieve and/or maintain, equipping them for a range of roles and responsibilities throughout their career.

To ensure that education programmes prepare their graduates to enter professional practice, entry to practice threshold competences could be set. Entry to practice threshold (also referred to as entry to practice threshold competences or entry to practice milestone), is a point on the continuum that describes a minimal acceptable level of competence to safely and effectively practice as a physiotherapist (Figure 4).²⁶



Figure 4. Entry to practice threshold





Section 2: Physiotherapist entry level education programmes

Section 2: Physiotherapist entry level education programmes

This section provides guidance for the development of a physiotherapist entry level education programme at the recognised higher education institution (HEI). It describes the six necessary elements for the development of a high quality programme including:



Introduction

Designing a physiotherapist entry level education programme is a dynamic, inclusive, and iterative process, as the programme must prepare graduates for the complexities of present and future practice as well as the evolving profession of physiotherapy. The programme encompasses both curricular and non-curricular components, such as infrastructure and services.²⁷ The programme content, learning activities, and assessments should ensure students graduate as competent physiotherapists capable of meeting the physiotherapy needs of society. The programme also needs to be flexible enough to respond to the changes in the social, economic, political, cultural, historical, environmental, and regulatory contexts in which graduates will practise.

The design of a professional qualification programme is a value-laden process in which decisions are made about the inclusion and exclusion of certain content, ideas, principles, or perspectives. It is a challenging task of imagining the unknown future based on the current knowledge. Critically examining the basis and assumptions on which these decisions are made should ensure that entry level programmes in physiotherapy have a solid philosophical, theoretical, and pedagogical foundation.

The first professional qualification, obtained in any country, should represent the completion of a programme that qualifies the person to use the professional title of 'physiotherapist' (or recognised title) and to practise as an independent professional. Physiotherapist entry level education programmes must be grounded in the nature and scope of physiotherapy and, at a minimum, should:

1. reflect the scope of physiotherapy, described in World Physiotherapy's policy statement: Description of physiotherapy,⁹ and the domains of competence of physiotherapist practice (Table 1)
2. ensure the graduate is competent to practise by requiring them to evidence that they have achieved specific knowledge, skills, and attitudes according to the entry to practice threshold competence
3. enable the graduate to meet professional standards consistent with World Physiotherapy guidelines
4. be delivered, at a minimum, through a bachelor's level degree with physiotherapy in its title; the programmes should be aligned with the appropriate education qualification frameworks in the given jurisdiction




The requirement that physiotherapist entry level education programmes are university bachelor's level education programmes with physiotherapy in their title is essential to ensuring the development of the theoretical, cognitive, practical, professional, and transferable skills which underpin the practice of physiotherapy. The cognitive skills should reflect the descriptors addressed in the qualifications framework (Box 1) in the relevant part of the world and be appropriate to the relevant professional skill.

Box 1. Examples of education qualification frameworks:

European Education Qualifications Framework,²⁵ United Arab Emirates Qualifications Framework,²⁸ South African National Qualifications Framework,²⁹ Australian Qualifications Framework,³⁰ Canadian Degree Qualifications Framework.³¹

An example of the alignment between academic requirements of a qualification framework and physiotherapy professional requirements is given in Table 2, and includes problem recognition, analysis, synthesis and evaluation, and the application of theory to practice, which all underpin the process of physiotherapy.³²

Table 2. Relationship between academic and physiotherapy professional requirements (example)

European Qualifications Framework (EQF) Domain level 6 bachelor's level ³²	EQF generic learning outcome	On successful completion of the programme, the student will be able to demonstrate:
 Knowledge	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Application of scientific underpinning and critical thinking around the evidence-base of practice
 Skills	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Advanced problem-solving skills and clinical reasoning in unpredictable clinical situations related to physiotherapy
 Responsibility and autonomy	Manage complex technical or professional activities or projects; take responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups	An ability to manage, apply and supervise a programme of intervention for clients in unpredictable psychosocial and pathological situations







In circumstances where the entry level education programme qualification is set at a higher level, such as at the master's or doctorate level, the programme should nonetheless include the attainment of the expected minimum physiotherapist competences. At the same time, it should enable achievement of the academic and research skills to be appropriate to that particular academic level, as defined by national and international standards.

A physiotherapist entry level education programme integrates theory, evidence, and practice, as well as knowledge, action, and identity. It must include professional practice in a range of environments in which physiotherapists work. Students should also be introduced to all aspects of diversity and inclusion that influence and inform professional practice equity in physiotherapy. It is expected that, upon successful completion of the programme, the graduate will be able to demonstrate the required knowledge, skills, values, and personal, social and methodological abilities to be a competent physiotherapist who practises independently, in a safe, effective, equitable, accessible, sustainable and ethical manner. A physiotherapist entry level education programme builds physiotherapists who are knowledgeable, self-assured, adaptable, reflective, humanistic and service-oriented and who, by virtue of critical thinking, lifelong learning and ethical values, are able to render independent judgments concerning client needs.

Programmes need to be designed in such a way that they are evidence-based and forward thinking, maintaining the significance and relevance of physiotherapy as a profession whilst also preparing graduates for the complexities and uncertainties of the future practice in any given context. A bachelor's, master's or doctoral level degree are all valid entry points to the profession. The decision on what level is required should be based on the needs and affordability in a specific social, economic, political, educational, and regulatory context. The programme should be flexible and should recognise the changing needs of populations and their health priorities, as well as evolving physiotherapist practice and changing health systems, including financing, and health workforce development. Entry level physiotherapist education should also be responsive to the changing role of clients in health service interactions and the increasing use of technology in the provision of health care. It should prepare graduates so that they are competent to safely and effectively practise in both urban and rural communities, locally and globally in a variety of settings, and to be able to acknowledge their roles as facilitators and educators of other health personnel necessary for the attainment of client goals.

To achieve this, the development of a physiotherapist entry level education programme should be a collaborative and inclusive process. World Physiotherapy encourages education providers to work collaboratively with service providers and the professional and statutory regulatory bodies as the professional requirements need to be incorporated into the design of programmes. This collaboration enables the development of a programme that is connected to the realities of physiotherapist practice and better prepares graduates to respond to the changing needs of populations and the dynamic interplay of social, political, economic, and environmental factors, as well as emerging global health issues (such as the COVID-19 pandemic).

The development of a physiotherapist entry level education programme should consider these six elements:

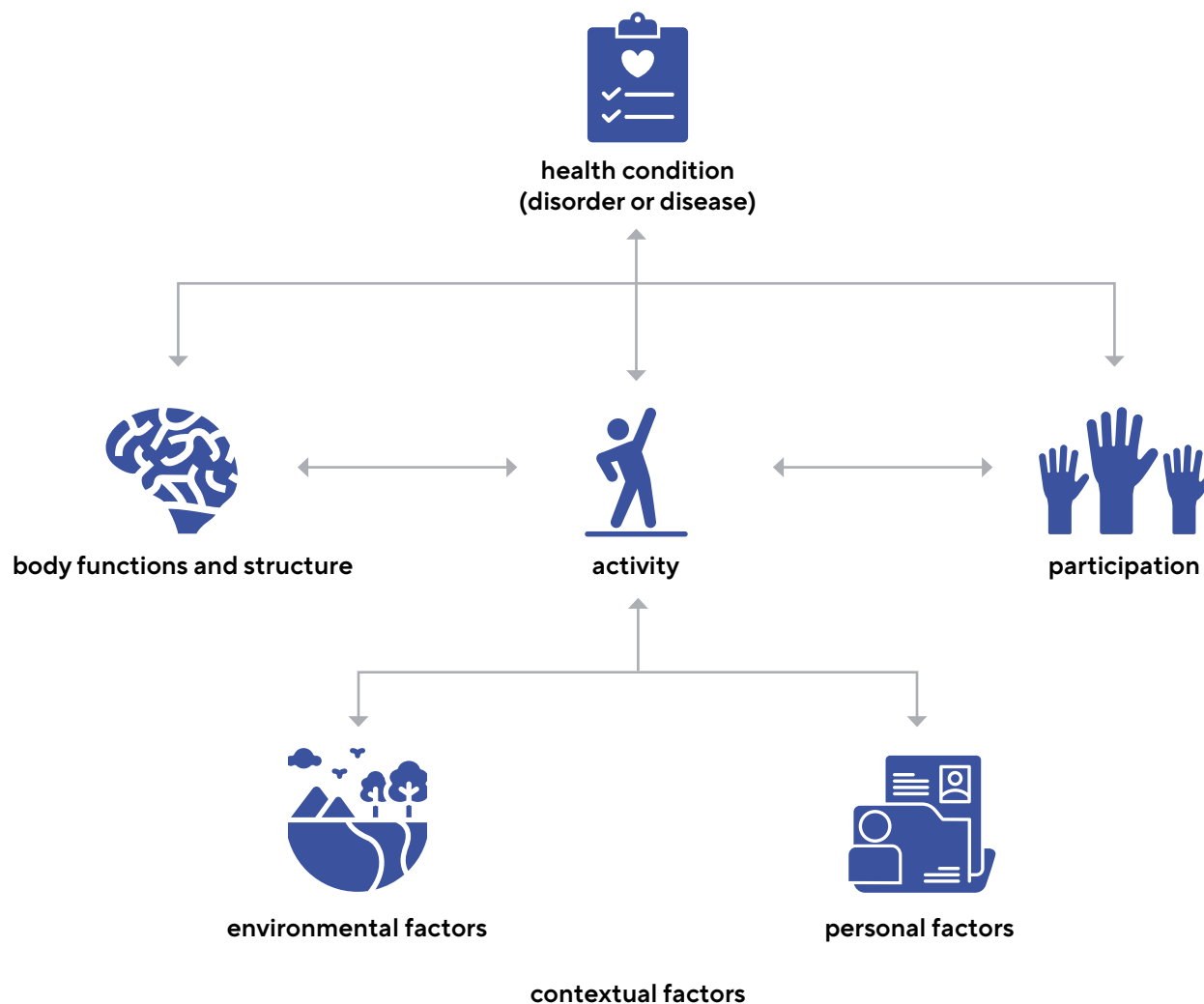
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programme foundations
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curriculum
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teaching, learning, and assessment
- 4 
infrastructure and culture
- 5 
academic staff
- 6 
quality assurance

Programme foundations

Programme foundations reflect theoretical and philosophical understanding of physiotherapy as well as teaching and learning. They position the programme in relation to the future vision of physiotherapy as a health profession, by making decisions about the required physiotherapy knowledge, skills, and personal, social and methodological abilities.

Understanding and conceptualisation of the human body and movement, and a view of health and rehabilitation and the theoretical models that explains them, are the foundational aspects of the programme. World Physiotherapy encourages a curriculum that is based on a functional rehabilitation model and the client-centred biopsychosocial model (Figure 5).³³ The stated needs and aspirations of the client should drive the outcomes, and their skills for recovery and resilience should be the starting point.

Figure 5. International Classification of Functioning (ICF) model of functioning, disability and health



The programme foundations inform the development of a curriculum that is a comprehensive plan for learning in the academic and practice components of the programme.³⁴ In addition to theoretical and philosophical foundations of physiotherapy, the educators' and curriculum developers' own views of knowledge and learning informs curriculum development. It is an epistemological question about the nature of knowledge that informs the theoretical and practical approaches to learning, including what is being taught and learned, and how it is done. Behaviourist, cognitivist, constructivist, and connectivist theories of learning all contribute to the ways learning resources are developed and used in programmes, as well as how learning interactions and experiences are designed and implemented.³⁵

Physiotherapy practice in the 21st-century happens within health systems that are complex, interprofessional, integrated, technology-mediated, uncertain, and constantly changing. To prepare students for contemporary physiotherapy practice, it is important for educators to re-examine the philosophical and theoretical foundations of physiotherapy, as well as the teaching and learning approaches they use in the entry level physiotherapist education programmes. These foundations guide the curriculum development; inform teaching, learning, and assessment strategies; support decisions regarding where and how the curriculum is implemented; and ultimately, facilitate the attainment of learning outcomes. A philosophically, theoretically, and pedagogically grounded curriculum is characterised by progressive development and the integration of knowledge, clinical skills, independent thinking, ethical and value analysis, communication skills, clinical reasoning, and decision-making.

Curriculum

The curriculum represents a comprehensive plan³⁶ of the academic and practice education components of the physiotherapist entry level education programme. The curriculum should be organised in a series of sequential and integrated courses that should facilitate the achievement of student learning outcomes.

The curriculum is also a written document with the detailed description of the academic and practice education components. The programme foundations should be reflected in a statement of the physiotherapist professional entry level education programme's mission, goals, and outcomes. They should also be reflected in a statement of the philosophy, principles (general and educational), values, and the curriculum model on which the programme is built. The philosophical, theoretical, and pedagogical foundation of the curriculum should be stated along with statements of expected student learning outcomes.

Curriculum content should be informed by the required competences that graduates should have upon course completion. In order to prepare students to become autonomous practitioners, the content should include activities that students should be able to perform to a defined standard upon completion of the programme. Competences should be a basis for defining learning outcomes in terms of knowledge, skills, and personal, professional, social and methodological abilities, presented in different learning and practice situations.

Learning outcomes

It is expected that the physiotherapist entry level education programme curriculum will have clearly identified learning outcomes. There is a shift from learning objectives to learning outcomes in professional education, although some institutions still require a statement of learning objectives. This shift represents a change of focus from the intent of education to actual results, from inputs to outcomes. It is more than a semantic change; it is a shift in focus of both the content and the teaching, learning, and assessment approach.

The learning outcomes should reflect the expectations and competences described in this document. Learning taxonomies, such as the well-known Bloom Taxonomy, are often used when defining learning outcomes.³⁷ The graduates should achieve the learning outcomes and meet professional standards consistent with World Physiotherapy guideline for standards of physiotherapy practice.³⁸

Competences, learning outcomes and the curriculum content should be aligned. While competences are stated in broader terms, learning outcomes specify what students should be able to do in order to demonstrate that they have acquired the specific competence. The domains of physiotherapist practice competence could be used to stimulate thinking when defining learning outcomes. Activities in each domain of physiotherapist competence can be turned into statements of measurable learning outcomes by further specifying them and indicating by when each of the outcomes is intended to be achieved. Some learning outcomes could be achieved by the end of a specific course, an academic year, or by the end of the programme. An example of the competence-activity-learning outcome alignment can be found in Appendix 2.

The learning outcomes drive the overall structure of the programme in which components delivered at the HEI and at practice sites are fully integrated. Similarly, they guide the decisions about which parts of the curriculum could, or should, be online and those that must be on site. Whether they are online or on site, academic and practice components are designed to provide students with the knowledge, skills, and abilities that are needed for entry into the practice of physiotherapy. The learning outcomes also drive the selection of teaching, learning, and assessment strategies to deliver and assess students in the most effective and appropriate way.

Syllabi

The curriculum has a series of organised, sequential, and integrated courses - a discrete set of units - designed to facilitate the achievement of learning outcomes that are described in the syllabi. Different terms are used to describe these units such as courses, modules, study-units, or papers. The syllabi describe the details of each subject and topic

covered with their specific content, learning and teaching approach, reading list, learning outcomes, assessment strategies, and timelines.

Curriculum content

Physiotherapist entry level education programmes should prepare students to meet the current needs of clients and the standards of practice, as well as enable them to respond to the future needs of, and developments within, physiotherapy. Students should become competent in the different domains of physiotherapy practice addressed in Table 1.

Curriculum content should enable the achievement of the learning outcomes. It should be grouped according to the client's needs and the purpose for which the skills and interventions are being used. The list below indicates a range of content which is appropriate for physiotherapist entry level education programmes. It is a dynamic list which will change as the evidence for effectiveness is generated, or new areas of practice emerge, such as digital practice. This means that evidence-based approaches and techniques appropriate to the practice and local context and setting should be taught. If evidence is produced which shows a modality is not effective, teaching of the modality should cease. For example, use of ultrasound and the McKenzie approach for low back pain.³⁹

The selection of content should be pragmatic in relation to the length of the programme and the local practice environment. The physiotherapist professional curriculum includes content and learning experiences in:

biological and physical sciences

anatomy and cellular biology, histology, physiology, exercise physiology, exercise science, biomechanics, kinesiology, neuroscience, pathology, imaging, and pharmacology

social/behavioural/technological sciences

applied psychology, applied sociology, communication, ethics and values, equity, diversity and inclusion, management, design thinking, innovation, finance, teaching and learning, law, information communication technology (ICT), including laboratory or other practical experiences

clinical sciences

cardiovascular, pulmonary, endocrine, metabolic, gastrointestinal, genitourinary, integumentary (skin), musculoskeletal and neuromuscular systems, and the medical and surgical conditions frequently seen by physiotherapists

The theory which underpins physiotherapy should be applied to its practice and integrated with skills development and practice education experience. Clinical sciences should be applied across the lifespan to underpin physiotherapeutic management, and also to groupings of clients/conditions who may respond to physiotherapy interventions - for example, in fields of infectious diseases, oncology, mental health, burns, health promotion, global health etc.

evidence-based practice and research

evidence-based practice, types of data, literature search and review, research methodologies (qualitative, quantitative, and mixed methods), applied statistics, evaluation of literature and evaluation of research

skills and characteristics of a competent physiotherapist

critical thinking, clinical reasoning, ethical practice, professional behaviours, effective communication, cultural responsiveness, effective team working, client-centred care, client assessment including use of outcome measures, interpretation of assessment findings and intervention planning, evidence-based interventions (exercise therapy and physical activity, manual therapy, electro physical agents), digital practice, health promotion and prevention of disability, education

practice education experiences

all aspects of the client management model (from assessment and examination to diagnosis and prognosis), plan of care, interventions including treatment, education, prevention, health promotion and wellness programmes, leadership, management, and evaluation, in a range of settings where physiotherapists work. This may include but is not limited to: health institutions and clinics at primary, secondary and tertiary levels; industrial and occupational settings; schools; community; homes; and so on. Students should be able to practise in any of these settings.

Where governments and regulatory authorities require the addition of other subjects, such as local culture, law, or religion, these should be proportionate to ensure sufficient time is given to the physiotherapy specific subjects. Where the proportion of generic subjects is more than minimal, the length of the programme should be extended accordingly.

Practice education

Practice education is an essential element of physiotherapist entry level education programmes, including in sites away from the HEI. It is direct practice experience under the supervision of appropriately qualified physiotherapists allowing the students to work with clients, groups, and communities. Practice education allows students to integrate acquired knowledge, to continue to learn in a real practice setting, and to further develop their competences (Box 2). Practice education should be integrated with the academic part of the programme. This means that students are first prepared for practice placements by studying relevant theory and developing associated skills prior to the placement, and as their skills and experience increase, practice education involves access to increasing levels of responsibility. As digital physiotherapist practice develops, this should also be included in learning experiences for students.

Box 2. Practice education provides opportunities for physiotherapist students to:

- integrate knowledge, skills, and professional behaviours and to apply them in practice settings
- learn through practice, experience, and reflection
- enhance clinical skills in assessment, diagnosis, planning, intervention, and re-evaluation
- understand and integrate the biopsychosocial and environmental bases of practice
- enhance their skills in communication at all levels
- demonstrate appropriate professional behaviour
- experience professional and interprofessional socialisation
- become an active collaborator
- develop behaviours and interpersonal skills that are requisites of the profession
- become a competent and autonomously practising entry level practitioner
- develop a sense of responsibility for lifelong learning

Reflection on practice education experiences should be facilitated to promote deep learning with enhanced clinical decision-making and clinical reasoning. Therefore, alternating phases of academic and practice experiences is an effective way of developing the professional graduate physiotherapist. However, a range of constraints may dictate the organisation of practice education across a programme.

There must be enough practice education to ensure that, as a student's clinical skills progressively develop through the programme so too does their independence and autonomy as learners, to equip them for lifelong learning. In addition, their professional development as independent and ethical practitioners should evolve. Practice education should be the equivalent of not less than one third of a curriculum.

Practice education should contain opportunities for each student to assess and use physiotherapy interventions with a wide range of clients who have movement dysfunctions. These will have arisen from problems and conditions that have a neurological, cardiopulmonary, musculoskeletal endocrine, metabolic, gastrointestinal, genitourinary, integumentary, or mental/psychological element, or a combination of these. In addition, opportunities should be provided to work within specific groups such as with children, adults, older people, and those at the end of life.

All core skills should be practised and applied to a range of problems and within a range of practice settings, including digital practice. There should be sufficient opportunity for students to achieve all the clinical competences, to demonstrate professional skills and behaviours, and to meet the expectations outlined in this framework.

The individual experience of each student, which may vary between students, should be monitored throughout the whole programme to ensure this broad scope is achieved and that the threshold competences are met.

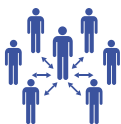
The practice education component of physiotherapist entry level education programmes should consider the contractual relationship between the HEI and the clinical sites, as well as the expectations of:



society and healthcare needs in general



the physiotherapy profession



the practice education coordinator



the practice education site supervisors



the student



Teaching, learning, and assessment

Teaching, learning, and assessment approaches are closely linked to the foundations and the content of the curriculum as they operationalise how learning outcomes are achieved. They should be aligned with the overall learning outcomes as well as informed by the contextual factors, professional values, and the vision for the future. Selected approaches should consider the local needs and assumptions about the context in which physiotherapy is practised; the role of clients; educational models; and learning activities and their sequence. Teaching and learning methods (Box 3) that most effectively enable the student to achieve the learning outcomes should be used. Decisions about teaching, learning, and assessment should be based on evidence on the best approaches that facilitate learning to become an independent professional.

Box 3. Examples of learning and teaching methods include:

lectures, seminars, tutorials, videos, podcasts, simulations, standardised patients, laboratories, virtual and augmented reality (VAR) sessions, structured clinical sessions, integrated sessions, structured site visits, discussions, personal development plans, problem-based learning, patient management problems, practice-based learning, competency-based learning, case study based learning, student-led learning, team-based learning, collaborative learning, self-directed learning, reflective journals and professional development portfolios, learning from experience, use of social media. These methods can be used either online or on campus.



The teaching, learning, and assessment approaches used should be designed to most effectively enable the student to achieve the learning outcomes and most appropriately assess those achievements. These decisions about how to implement the physiotherapy curriculum are not neutral. Traditional didactic approaches, such as large lectures or the separation of disciplines, are underpinned by certain values, hierarchies, and relationships between theory and practice, prevention, and intervention. Collaborative, team-based, problem-based, or inquiry-based learning brings forward a different set of values and perspectives on hierarchies and relationships. Student-centred interactive learning encourages students to identify and meet their own learning needs and to develop responsibility for their own education and professional development. For example, physiotherapy students respond positively to the collaborative environment created in the flipped classroom, particularly in relation to their autonomy and flexibility.⁴⁰

Use of interprofessional learning in the curriculum is an example of how values and assumptions influence both learning and relationships among various services providers. When interprofessional learning is underpinned by a social-constructivist view of learning it gives the student opportunities to learn through collaborative and social interactions with other professionals.⁴¹ Interprofessional and collaborative learning opportunities prepare the student to bring unique physiotherapy skills and knowledge to their interprofessional practice.

The nature of physiotherapy practice means that a mixture of approaches to teaching, learning, and assessment is warranted. A range of complex skills is required to be developed longitudinally throughout the curriculum. Intellectual and practical skills should be integrated, bringing theoretical and practical knowledge together, to facilitate learning about, and within, practice.

Figure 6. Integrated curriculum

An integrated approach to the application of theory and practice is necessary (Figure 6). Academic foundations should be further developed within practice education. Experiences of practice education should then be reflected upon, back in the academic setting. This will facilitate deeper learning and effective clinical decision-making and reasoning.

Prior to application in the clinical context, the practical skills (for example, observation, palpation, analysis of human performance and modalities) are developed in the classroom and laboratory sessions through demonstrations and practise on peers, with their consent. Seeking consent from students each time they participate as 'models' protects both students and staff, as well as enabling students to experience the process of obtaining informed consent from clients. The practical skills should then be revisited, refined, and applied in more complex ways in practice settings, as the student progresses through the programme.

Teaching and learning methods should be pedagogically sound and carefully chosen as part of an overall strategy which utilises the best online, and on campus, learning methods to achieve specific outcomes. To further learning within the entry level programme, the student should have time to interact with teachers and fellow students to develop intellectual, practical, and clinical skills; to challenge; to deepen thinking (to include broader experience into case-based discussions); and to provide and receive feedback. This could be done in practice placements, on campus, or in a digital learning environment.

Assessing learning

Each learning outcome should be assessed so that the student can evidence that they have achieved what is expected and required from them. However, not all outcomes need to be assessed separately as several outcomes may be examined by a single piece of assessment. The programme should have a comprehensive and fair assessment strategy that includes a range of assessment methods appropriate to the outcome and student level (Box 4). Students should be objectively and transparently assessed, with feedback given to the student to inform their future learning. A mix of formative and summative assessment methods could be effectively used, and their selection should be driven by the relevant learning outcome. For example, a learning outcome on verbal communication is best tested through a verbal test (for example, oral presentation).

Box 4: Examples of assessment methods include:

written and practical examinations, competency-based assessment, verbal presentations, viva voce examinations, objective structured clinical exams (OSCE), dissertation, case history based projects, essays, programmatic assessments, self- and peer-assessment, portfolios, reflective writing, authentic continued assessment.

Clinical performance can be assessed through competence-based assessment. This measures how closely the student is performing in relation to a minimum expectation or threshold competence. The expectation acts as a threshold, over which the student's performance must cross for them to be judged as competent to practise.⁴²

Each competence should be accompanied by details of the enabling elements to support learning and also to enable consistency of judgement as to whether the competence is achieved. These elements are commonly referred to as components, characteristics, criteria, milestones, or key indicators. As reviewed earlier in this document, some professional associations have published broad competence frameworks for initial and continued competence (Appendix 1). These can be used for student assessment, or for performance audit, to allow and maintain professional registration.

Higher education institution (HEI) infrastructure and culture

Programme development needs to take into consideration the location where teaching and learning will happen, including administrative, organisational, cultural, and financial characteristics, as well as the infrastructure of the HEI. Physiotherapy programmes should take place within an HEI which is appropriate for the delivery of a physiotherapist professional entry level education programme and which is approved by an appropriate national authority (for example, ministry of health, higher education authority, department of education). The institution should have a system of academic awards and a course credit system that are clear and transparent, in order to facilitate the transferability to, and recognition of, the qualification in other countries. In addition, the HEI should demonstrate that it has academic standards and descriptions of academic staff roles, workloads and expectations in place that recognise that physiotherapist education is made up of both professional and academic disciplines.

Policy and administrative infrastructure

Physiotherapist education requires an infrastructure to support a dynamic curriculum which takes place in the context of rapidly changing healthcare and education. Recognising that there is considerable diversity in the social, economic, and political environments in which physiotherapist education is conducted throughout the world, some basic requirements of the academic environment should be met. The curriculum can only be effective if the administrative, policy, physical, and digital infrastructures are in place to facilitate both the academic and practice components of the integrated curriculum to be implemented on sites and in digital learning and practice environments. The policy and administrative environment should ensure flexibility in delivery of the curriculum to mitigate the consequences of disruptions, such as those caused by the COVID-19 pandemic, or by civil unrest in some countries. This flexibility also facilitates seamless transitions between the online and on-site delivery of programmes.

In addition, the growing evidence base of the physiotherapy profession requires a curriculum that can incorporate the latest research and developments. This means that policies and administrative procedures must be in place to internally review and update on a regular basis both the curriculum and resources required to implement it.

Policy and administrative infrastructure should facilitate regular internal evaluation and review of the programme. An annual cycle of review should be conducted from a quality improvement perspective. The regular reviews allow for using institutional benchmarking to compare pertinent data (student profile, completion rates, results, and so on) within the programme, between cohorts of students, and with data from other similar programmes. During the review, data are collected from stakeholders including, at a minimum, programme academic staff, practice educators, current students, graduates of the programme, and at least one other stakeholder group (for example, employers of graduates, clients, peers, or other health professionals). Reviewers of the programme document the strengths and weaknesses of the programme and make an assessment about whether the programme expectations and goals are being met. They also make recommendations for improvement. This should result in regular improvements being made to the programme, and will inform programme revision, external benchmarking, and external accreditation events. The review process should be documented and produce the evidence for ongoing, formal evaluation of the programme.

The educational institution should also have in place appropriate policies for programme development, approval, delivery, and student assessments to ensure that standards of education are maintained. The programme should have policies and procedures regarding academic staff, general staff, students and clients including student recruitment, their rights, responsibilities, safety, privacy, dignity, equity, diversity and inclusion. Policies and procedures regarding admission, retention and progression, and protection of practice education sites, should also be in place.

The academic environment should be intellectually challenging and foster the acquisition of academic skills and a spirit of scholarship and inquiry. It should support students in both their personal and academic development and assist them to become aware of multiple styles of thinking, diverse social concepts, values, and ethical behaviours. The team involved in the development of the physiotherapy programme and curriculum should demonstrate a commitment to meeting the expectations of the HEI, the students, and the profession.

In addition, organisational culture is an important aspect to consider in programme development. There are many factors that impact on the design and delivery of programmes, including but not limited to: the history and the position of the programme within the departmental structure of the HEI; academic staff composition; admission requirements and procedures; commitment to quality improvement; compatibility of institutional missions and their values and those of the physiotherapy programme. The HEI should be committed to future maintenance of the programme within the institution by ensuring sustainable funding to maintain quality and to enable the continuous improvement of resources to educate students who will be fit to practise. The level of financial support should be adequate to meet the programme goals and expected student outcomes and to support the integrity and viability of the programme.

Infrastructure: learning environment, physical and digital resources, and student services

Higher education institutions offering a physiotherapist entry level education programme must provide a sufficient and safe space for classrooms, laboratories for skills and research, academic and administrative offices, and for meeting, storage and other spaces. It should also put in place an adequate digital infrastructure to allow students to remotely access parts of the curriculum that are delivered synchronously or asynchronously. The same applies to the library system and associated learning resources that should be available both online and on-site to enable successful outcomes. Physical and digital infrastructure should be adequate to meet the teaching and learning needs of both the academic staff and students, as well as to meet the occupational health and safety requirements. It is recognised that the infrastructure will vary in different countries due to contextual factors and the availability of resources.

Digital information systems should be available both on, and off, campus, and ensure confidentiality and privacy protection for the students using them, including the data analytics. Students should have access to computing facilities, with adequate technical support. The COVID-19 pandemic has exposed the digital divide among students, as some students did not have access to computers or a high-speed internet connection, and their home environment was not conducive to online learning. The ability of students to access online learning should be taken into consideration when decisions are made about providing online learning opportunities.

The entry level education of physiotherapy students includes their personal development and it is desirable that they are exposed to broader extra-curricular experiences. The HEI may provide opportunities relating to sports, leisure, faith, and volunteering. These are normally provided on an institution-wide basis, beyond the physiotherapy department, so students can interact with those studying other subjects. Accessibility support services for students with disabilities are usually provided at the institutional level and are available to all students, including physiotherapy students. The HEI may also provide additional services including careers and pastoral counselling, financial advice, healthcare and other support. There should ideally be private space for confidential discussions with students. Students will benefit from the provision of both private and interactive study spaces. Support services and extra-curricular experiences should be accessible to students both in person and digitally.

The equipment, technology, occupational health and safety standards, and materials (including personal protective equipment) should be sufficient in type and number to meet the needs of the students and the academic staff, in

order to facilitate the achievement of the student outcomes. They should also reflect contemporary physiotherapy practice, including digital practice. Students must be taught practical professional physiotherapy skills in a skills laboratory or practical room, which contains essential equipment including treatment couches, pillows, and modality-specific equipment. There should also be a gymnasium, or a room with empty floor space and equipment, for the development of movement, exercise, and functional restoration skills. For digital practice skills development, the students must have access to a private space where they can use a secure online system that protects the privacy and confidentiality of clients.

Practice education sites

A strong practice education component requires high quality practice placements that are ensured through collaborative relations with service providers. A formal relationship should be established between the HEI, in which the physiotherapist entry level education programme is run, and each practice education site, including those that provide digital practice experiences. The agreements should define the relationship at the organisational level - the relationship between academic staff, practice education coordinator, on-site practice educators and students. It should also outline requirements for communication (for example, types, frequency, purposes), as well as terms for the engagement of on-site clinical educators, the practice education staff-student ratio, and any placement auditing or evaluation requirements.

These agreements also define the requirements for students, including any student health assessment and immunisations, insurance, malpractice coverage, and criminal background checks, (where required), or other requirements specific to the practice education site. They provide details of the contract timeframe and specific requirements of the site relating to policies, procedures, hours, facilities provided, student expectations, dress code, and so on. Responsibilities for the evaluation of student performance and grading, as well as the minimum performance expectations (threshold competence) for successful completion of each clinical experience, are outlined in the agreement. Finally, the agreements contain details on how to deal with any disciplinary, health, or performance matters relating to the student under the responsibility of the HEI and the physiotherapist entry level education programme.

Practice education sites expect students to have competences for the clinical experience. They also expect students to take responsibility to contact the site and introduce themselves confirming the details of their placement. Students are expected to exhibit professional behaviours; comply with policies and procedures; practise in accordance with supervision requirements and professional, safety, and clinical responsibilities; respect clients' confidentiality; and to participate in the assessment and evaluation of the placement experience, including reporting any concerns professionally and promptly according to written procedures.



Academic staff

A physiotherapist entry level education programme requires academic staff to be mainly composed of physiotherapists alongside other appropriately qualified educators who, as a group, can deliver a wide-ranging curriculum, maintain clinical skills, and undertake research. Curriculum development, learning design and delivery, and the evaluation of the programme, are the combined responsibilities of the core academic staff and the programme leader. Whilst this document states that a physiotherapy degree is the basic requirement, World Physiotherapy understands that certificate and diploma programmes were previously the entry level professional requirement for practice in some countries/territories. Therefore, individuals who possess such physiotherapy qualifications should not be precluded from an academic staff position if they can demonstrate evidence of having a relevant graduate degree and advanced experience.

Academic staff members need to develop their physiotherapy students from admission, to a level of competence comparable to the entry level threshold expectations for the profession. Academic staff should therefore have the requisite academic, clinical, and educational qualifications and experience. As well as being experts in their clinical field, they should be sufficiently qualified as educationalists so that they can interpret and deliver a curriculum to the appropriate academic and clinical level. They should also be able to teach and facilitate learning that seeks equity, embraces diversity, and promotes inclusion. As qualified educationalists, they should understand pedagogy, how to use educational technology, and be skilled in using a variety of in-person and online teaching approaches, as well as assessment strategies.

Academic staff work closely with general staff members who support the programme allowing academic staff to focus on teaching and research. General support staff members include technical staff (who maintain physiotherapy and research equipment), computing technologists, administrative staff, finance staff, and others. Their expertise is valuable to the running of an academic department and the establishment of such a team is encouraged.

Description of physiotherapy academic staff

Titles and descriptions of physiotherapy academic staff vary from country to country, and the titles given below are for indicative descriptive purposes only. Appendix 3 outlines the characteristics expected of academic staff involved in the delivery of physiotherapist entry level education programmes. It is important that the programme academic staff provide a mix of academic qualifications, research competences, clinical and professional expertise, and specialisations. Members of the academic staff of the physiotherapy programme are responsible for the development of the admissions criteria, curriculum content, nature and content of practice education, assessment processes, and expectations of acceptable professional and ethical behaviours by students. The HEI's recruitment policies and procedures ensure that there are adequate numbers of physiotherapy academic staff to achieve the programme outcomes. The delivery of the programme is the responsibility of a variety of programme staff described below.

Core academic staff

The core academic staff is composed of members of the academic staff of the HEI's physiotherapist programme. Individual academic staff shall demonstrate that they have contemporary expertise in their assigned teaching areas, effective teaching and student assessment skills, a well-defined scholarly agenda, and a record of service consistent with the expectations of the physiotherapy programme and the institution.

Programme leader (also referred to as head, director, or dean of discipline or school)

The programme leader is a physiotherapist with evidence of an appropriate academic qualification and contemporary expertise in management, communication, and leadership. Programme leaders should have the authority and responsibility for ensuring the regular evaluation of all physiotherapy academic and associated staff, and for setting out plans for their ongoing professional and academic development. They plan and administer the programme's financial resources including short-term, and long-term, financial planning. Programme leaders are responsible for ensuring the equitable application of rights and privileges to all individuals involved in the delivery of the programme. They are also responsible for the quality, internal review and evaluation, and external accreditation of the programme.

Practice education coordinator

The practice education coordinator is a physiotherapist and an academic staff member who demonstrates an understanding of contemporary practice, quality practice education, the clinical community, and the health delivery system. The practice education coordinator conducts, develops, coordinates, manages, and evaluates, on an ongoing basis, the practice education programme that is normally delivered by physiotherapists in the practice environment. The coordinator is responsible for establishing the organisational and contractual relationship between the academic programme and the clinical facility; maintaining a relationship between the academic staff, the practice education site supervisors, and the students; and for communicating all appropriate information about the practice education programme in a timely manner. A major responsibility of the practice education coordinator is to obtain appropriate placement sites for all students to assure a wide variety of quality placements reflective of physiotherapist practice. This includes interprofessional practice and the management of clients with an array of functional problems and conditions across the lifespan and the continuum of care. The practice education coordinators ensure that relevant regulations, policies, and procedures relating to practice education are upheld, and that mechanisms to respond appropriately to issues or concerns are in place.

The practice education coordinator is responsible for establishing the specific learning outcomes, performance expectations, and the learning behaviours for the students for each practice education experience. They coordinate the assessment of the student learning experiences in the practice environment as well as providing the student with information about the practice education site in preparation for attending the placement. They communicate to the student the learning outcomes and the minimum performance expectations for successful completion of each practice education experience, along with the methods of assessment that will be used. They provide constructive feedback to students regarding their performance in the practice site. They ensure that the student practice experiences and workload in the practice setting are reasonable and appropriate for the student's level of education and that they are appropriate to help to build increasingly towards the knowledge, skills, and professional behaviours of a competent entry level practitioner. The practice education coordinator also ensures that students with documented disabilities receive accommodation.

Practice education supervisors

Practice education supervisors are physiotherapists working in practice education sites including digital practice. Ideally, they have a minimum of one year's relevant clinical experience, competence in their area of practice, and they can demonstrate effective clinical planning, teaching, and performance assessment techniques. Practice education supervisors are also called clinical educators, site teachers, preceptors, or mentors. They should receive training for this role as they contribute to the physiotherapist entry level education programme. The practice education site supervisors ensure that a philosophy of client management and practice education is compatible with the physiotherapist entry level education programme. They also ensure that roles and responsibilities of physiotherapists within the practice site are clearly defined and that there are adequate numbers of qualified physiotherapists to provide an educational programme for students according to the agreed staff-student ratio. Their responsibilities include providing services in an ethical, legal, and professional manner, complying with legal requirements including informed consent from clients for being managed by students, and ensuring that students adhere to the same standards.

The practice education site supervisors provide administrative support for practice education and ensure the health and safety of both the student and client. They orient the student to the practice education site and the programme, understand the specific learning outcomes, plan student learning experiences, and assure that the student's level of supervision and responsibility are appropriate for their educational level and competence. They provide feedback to the student throughout the placement. They evaluate student performance based on direct observations and feedback from team members and clients according to the performance assessment requirements established by the physiotherapist entry level education programme. As supervisors, they themselves demonstrate continuing professional development as an inherent part of their role and extend their knowledge and skill in providing student practice education experiences.

Associate academic staff

Responsibility for delivering some aspects of the programme (for example, physiology, psychology, statistics) may lie with associate academic staff - individuals who are not members of either the physiotherapy programme academic staff or the practice education staff. Evidence should be provided that the associate academic staff demonstrates contemporary expertise in their area of programme responsibility and participates in physiotherapist entry level curriculum development.

Quality assurance

Quality assurance of physiotherapist entry level education programmes is a systematic, cyclical sequence of procedures in which each stage of the educational process is examined, reviewed, and reported on at regular intervals. The process should ensure that the educational outcomes and experiences are satisfactory. The process should be sufficiently robust to assure students, the institution, and stakeholders that quality education is being provided.

There are two main aspects to quality assurance – internal and external.

Internal quality assurance incorporates:



development and approval of the curriculum, including a panel of peers and experts assessing whether the curriculum meets requirements and standards



regular review and evaluation of each component of the programme (module/course/study-unit/paper)



regular review and evaluation of the programme as a whole



data analysis including student entry profiles, assessment results, student surveys, staff comments, placement staff perspectives, employer views regarding competency to practice



evaluation of data and subsequent action plan, taking a quality improvement approach

An internal quality assurance review usually takes place annually, and the reports generated, and the improvements subsequently made, then inform external accreditation events.

External quality assurance usually refers to the process of accreditation or recognition. Both terms are considered to represent an independent, formal, quality assurance review of the physiotherapist entry level education programme, conducted by a recognised authority. In this document accreditation is used to denote both. The accrediting body may be governmental or non-governmental, and may have a statutory regulatory function, such as a statutory regulator, ministry of health, ministry of higher education or World Physiotherapy member organisation. The term 'accredited' is used for a programme which is regularly evaluated in a review process according to established educational standards by an external authority that is independent of the programme team.

The profession has a critical role in defining the nature of contemporary practice, determining practice expectations, and identifying demands placed on graduates, whatever accreditation model is used in a country. Therefore, the physiotherapy professional organisations have a role to play in developing formal external evaluation of physiotherapist entry level education programmes. The requirement for the accreditation of programmes is commonly part of a statutory or legislative framework, and part of the responsibilities of a regulatory authority. Documents that may guide the profession and influence this process of accreditation include the regulatory authority's code of ethics, the member organisation's code of ethics or guide for professional conduct, the standards of practice, and any curriculum guide.

In the absence of a statutory regulator, eligibility of the graduate for membership in the professional organisation may be set by a member organisation, or other accrediting body, as a condition for accrediting a programme. The organisation driving the need for accreditation may, therefore, be the physiotherapy professional organisation. In the absence of a legal requirement to accredit physiotherapist entry level education programmes, both the member organisation and HEIs need to agree that accreditation should take place. The member organisation may need to negotiate and discuss the issue with HEIs in the first instance.

The accreditation can be undertaken by:

- member organisation/professional organisation – supplementary to, or in the absence of, a regulatory authority
- nationally appointed regulatory authority or external agency qualified to accredit programmes in close collaboration with, but independent of, the professional organisation
- nationally appointed regulatory authority or external agency qualified to accredit programmes completely independent of the physiotherapy professional organisation
- international agency - the agency should be endorsed by World Physiotherapy and qualified to undertake the necessary review in other jurisdictions and recognised by the appropriate authorities
- World Physiotherapy accreditation service

The accreditation process of a physiotherapist entry level education programme can be described as engagement, reflection, report, and review. The satisfactory outcome of this process results in the accreditation or recognition of the programme, which then must be reviewed again at a specified future time. In many member organisations, the process is a formal quality assurance cycle that is evaluated by an independent authority.

Independent peer-review is important to maintain educational and professional standards in physiotherapist entry level education programmes. Accreditation is a quality assurance measure that considers the components of the programme; commonly examines dimensions of the physiotherapy programme; and relates the findings to professional expectations and benchmarks. Criteria for physiotherapist entry level education programmes include expectations about the institution, academic environment, the practice education of students, the academic and practice educators, and the academic standards required of the HEI by the accrediting body. These criteria correspond with programme elements described previously in this section.

External accreditation should take place alongside internal institutional quality assurance activities, such as academic departmental and programme reviews, academic staff evaluations, and research assessment exercises. Successful implementation of accreditation of physiotherapist entry level education programmes by accreditation authorities suggests that there is a shared understanding of the purpose of accreditation and its value in protecting the welfare and safety of the public by ensuring the maintenance of professional standards. Accreditation and the review of the programmes provides them with guidance for future developments. It raises an awareness that accreditation of the programmes assists in the development of the profession in the country and ensures its continuing development. Both the accrediting body and the HEI recognise that accreditation is an assurance that all elements of qualifying education are acceptable, that they fulfil the requirements for licensure, and they facilitate graduates of the programmes to become members of the member organisation.

Evaluating and maintaining the quality of programmes is important for students, academic staff, health service providers, clients of health services, and funders of students and programmes. All of them have an interest in ensuring the high quality of programmes. In addition, it may help the education institution promote its programme to an external audience. The process of establishing acceptable criteria for programmes can also provide opportunities for the profession, by contributing to the education programme development, and ensuring that the programmes reflect the needs of the population and the requirements of current and future physiotherapist practice.

For new physiotherapist entry level education programmes, which have been approved by a government ministry or HEI, or where there is provisional approval, or approval awaiting an external review, accreditation of the programme may take place:

- on an ongoing basis for the first cohort of students entering the programme
- for the first and second cohorts of students entering the programme, thereby making sure that (some of) the conditions identified in the first cohort that warranted change have been addressed in the second cohort
- before the programme commences

World Physiotherapy accreditation may be sought once a programme is established sufficiently to produce evidence of quality and outcome.

Accreditation roles and responsibilities

Accrediting body

The general responsibilities of the accrediting body may include establishing policy, standards, criteria, process, and timeframes for accreditation of physiotherapist entry level education programmes that reflect the evolving nature of education, research, and practice. Accrediting bodies often publish this information on their websites. The evaluative criteria for the accreditation of programmes include institutional and programme expectations. Institutional criteria encompass the status of the institution, academic environment, resources, policies, and procedures, while the programme criteria include academic and practice components of the physiotherapist entry level education programme.

Initially, the process of accreditation requires the applicant to review its programme and, following a period of reflection, prepare an application for accreditation. The components of such an application are decided in advance by the accrediting body. The requirements of application may be quite prescriptive in parts and less so in other areas. The purpose of the application is to enable the reviewers to decide if the physiotherapist entry level education programme meets the standards expected of the accrediting body.

The accrediting body is responsible for establishing a committee, including appropriately qualified physiotherapists, to review the accreditation application, and for providing training for expert reviewers. The accrediting body is responsible for accepting applications for accreditation and re-accreditation and undertaking reviews. They review evidence presented by the HEI demonstrating that their programme meets institutional and programme expectations. The accrediting body evaluates the strengths and weaknesses of the programme and determines if the expectations are being met.

A visit to the HEI by the accrediting body is part of the accreditation process. During the visit the accrediting body collects data from stakeholders in face to face meetings including, at a minimum, programme academic staff, current students, graduates of the programme, and at least one other stakeholder group (for example, employers of graduates, consumers of physiotherapy services, peers, or other health professionals).

Following the completion of the review the accrediting body reports back about the programme and: provides feedback; suggests requirements and recommendations; communicates the decision of the accreditation committee; notifies the relevant executive board of the accrediting body; shares the outcome of the process of accreditation;

and notifies the HEI. The accrediting body must operate a robust system of internal quality assurance to ensure a professional service is provided, that appropriate standards are upheld, and that consistency, fairness, and judgement is applied.

Higher education institution (HEI)

The general responsibilities of the HEI may include understanding the accrediting body's requirements and expectations of an acceptable physiotherapist entry level education programme. The HEI is responsible for seeking accreditation from an accrediting body or accepting notification of the need for accreditation or re-accreditation from an accrediting body. As part of the accreditation process the HEI is required to complete a self-evaluation of the programme and provide all other relevant documentation as evidence of meeting the expected standards. These may include, but are not limited to, a curriculum with a statement of the programme's philosophy, principles, values and expected student outcomes, as well as course syllabi and timelines, and documentation on teaching, learning, and assessment methods.

The HEI is responsible for facilitating a visit from an accrediting body, sending a response to the initial report from the accrediting body, and making changes as requested. If an HEI receives accreditation it is responsible for notifying the accrediting body of any substantial changes to the programme and seeking re-accreditation, or accepting notification of the need for re-accreditation, from the accrediting body.

A collaborative approach between the accrediting body and the HEIs is beneficial and creates a clear understanding of the expectations of the accrediting body and the HEIs. It also assists in providing clear communication of the roles and responsibilities of all participants. Such collaboration requires clear statements defining the contextual drivers for accreditation, roles, reporting relationships, accreditation criteria, and processes.





Section 3: Physiotherapist continuing professional development

Section 3: Physiotherapist continuing professional development

This section covers key aspects of physiotherapist continuing professional development (CPD) including steps in self-directed, lifelong learning in which all active physiotherapists engage to maintain continued competence. Steps include needs assessment, followed by participation in learning activity, reflection, application, practice, and documentation. This section also provides information about ensuring CPD quality from both the provider and client perspectives. Different terms are used to describe CPD (Box 5).



Box 5. Terms used to denote continuing professional development:

Continued/Continuous/Continuing Professional Development (CPD), Continuing Professional Education (CPE), or Continued Education (CE) are terms that are often used interchangeably. CPD has a broader scope than CPE and CE and is the term that is predominantly used here.

Introduction

Lifelong learning, and a commitment to professional development, is an attribute of a competent physiotherapist. CPD is part of a continuum of learning that starts with admission to an accredited physiotherapy programme and continues throughout professional life. Physiotherapists who provide professional services need to have, and maintain, a broad range of knowledge, skills, and abilities that are appropriate to the roles and responsibilities that physiotherapists have in practice, education, management, research, and policy. Each professional role requires a mix of various competences. For example, a physiotherapist working in a clinical setting needs a mix of physiotherapy specific competences (for example, assessment and intervention), generic competences (for example, communication) and role specific competences (for example, treatment of the ventilated patient; quantitative data analysis).

CPD describes the systematic, ongoing structured process of learning that underpins professional practice. It enables physiotherapists who have completed an entry level education programme to develop, maintain, and advance their personal and professional skills, knowledge, and behaviours. CPD is self-directed learning to maintain competence to practise. It ensures that physiotherapists stay current with physiotherapy and health advances and a changing healthcare and service delivery landscape. As the evidence base of the profession strengthens, practice must change in response to new evidence, to ensure that only effective physiotherapy is provided. Otherwise, competence is not maintained. CPD therefore improves outcomes for clients as well as advancing practice and service delivery. All physiotherapists should participate in learning activities that maintain, or increase, their professional competence and lead to safe, effective, and sustainable practice.

Those entering advanced practice or specialisation would normally undertake postgraduate study.

CPD learning opportunities

- formal - lectures, seminars, workshops, post-entry level programmes of study including postgraduate certificates and degrees
- informal - personal reflection on practice, personal development, working with expert mentors, independent study including the reading of professional journals

Formal CPD opportunities at a post-entry level include programmes that focus on a higher level of continued competence, and advanced and innovative practice. This means that programmes for advanced or specialist roles should include higher and complex clinical reasoning, and skills that cross disciplinary boundaries, while programmes for broader roles, such as leadership, should contain advanced transversal, personal development, and strategic thinking skills.

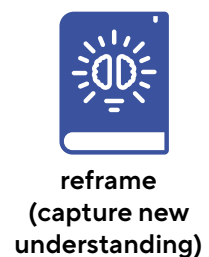
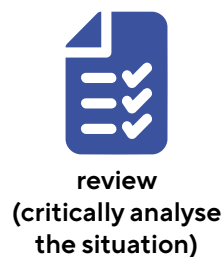
The selection of learning activities should be a thoughtful, reflective process addressing the individual physiotherapist's current work, knowledge and skills, future work plans, and required additional competences to meet future opportunities or professional responsibilities. Learning activities can be driven by scope of practice, improvement of practice, and professional ambitions. It can be linked to:

- developing higher level cognitive and practical skills for clinical expertise
- specialisation
- interprofessional collaboration and communication
- leadership and management
- health advocacy
- scholarship
- strategic policymaking
- supporting the practice education of student physiotherapists in clinical practice

Reflective practice

Professional development, and the resulting improvement in practice, occurs as an outcome of engagement in a learning activity, a developmental process of reflection, and application to practice. Reflective practice is widely accepted as an effective way of using learning to create change. The learning through CPD activities must be applied to practice to enhance its outcomes. Learning activities, such as case studies, problem-solving exercises, discussions, role-play, or clinical placements within the programme, can facilitate this. However, a key enabler is the process of personal reflection. Reflective practice is described by Schon as ‘the capacity to reflect on action so as to engage in a process of continuous learning’ and it is how experiences and learning are converted into actions, which change the way an individual thinks or does things.⁴³

Reflection is a conscious effort to think about things that have happened and to learn from them. This is done when physiotherapists:



Reflection can be done during (reflection in action), or after (reflection on action), an experience. Reflecting on formal and informal learning experiences will enable physiotherapists to change their practice. It can also be used to design action, or learning, plans to ensure that learning is continuous. Critical reflection is the reasoning process through which one can make sense of experience. It is an important skill for the practitioner to have so it should be developed in entry level education and embedded as a lifelong activity. A reflective journal in which reflections are written down can be a powerful learning and transformative tool.⁴⁴

Intellectual understanding underpins the use of skills, but many skills used by physiotherapists are complex and require repetition, feedback, and refinement to develop to a high level. Time should be invested in practising newly acquired skills. Once knowledge is understood and skills can be applied safely, the next step is to apply them in practice. This is a dynamic, changing situation where the needs are highly individual and may be very complex. Skills and knowledge should be adapted to ensure that individual needs are met. The application of new learning to the practice setting may occur during a CPD activity, or with support and supervision. It may also occur afterwards, without support and supervision. Seeking support from a mentor should be considered.

Analysis of learning needs

Where possible, CPD should be a planned and structured process. This can rely on an analysis of learning needs, development of a learning plan, and reflection. Through the analysis of learning needs, physiotherapists identify the knowledge and competences they need to fulfil their evolving roles. It could be done by first identifying existing knowledge and competences and then looking for any gaps between existing and required competences. In this process physiotherapists may also ask their managers or consult the learning needs identified in the performance evaluation process (if one is in place). Physiotherapists may also be able to refer to their job description or role competences if these are available.

Developing a CPD plan

Based on the learning needs, physiotherapists can plan how to fulfil them. Ideally, a learning activity for each learning need should be found. This can involve formal learning, such as a course, or informal learning, such as reading, observing others, or accessing mentorship. This plan may be included in a CPD record or reflective portfolio (Box 6). Such a document will also enable physiotherapists to record what they have learned and how they will apply it to their practice. This can be required by professional regulators to evidence that licensed physiotherapists have met CPD requirements.

Box 6. An example of a learning plan format:

The following questions should be answered in an individual learning plan.

1. What are the requirements of my role? What skills, attributes and competencies do I need?
2. What are my learning priorities?
 - What are my strengths?
 - What do I need to improve on?
3. What learning opportunities can I negotiate and access to meet my priorities?

The learning plan may be part of a reflective journal. This should include:

- Written reflection on how learning that has been undertaken can impact on practice
- What impact there has been on practice once the learning has been applied
- Written reflection on how strengths and areas for development are changing over time

Reflection is an important learning tool. A diary in which physiotherapists record significant incidents, what has been learned from them, and how this learning will impact on their future work. This can be a private, personal diary or may form part of their CPD record or portfolio.



Documenting CPD

Documenting CPD demonstrates engagement and facilitates reflection. The record may also be part of a reflective portfolio, in which reflections on learning and impact on practice are captured and maintained. Strengths and areas for development are considered and a future learning plan written. The plan can be used as evidence when applying for resources for CPD.

CPD may be documented by:

- certificates of attendance that record the fact that the participant has attended the course; certificates are awarded by the course organisers
- certificates of achievement that record the fact that the participant has successfully passed an assessed course
- inputs are records of the time spent on the learning activity and are counted, so this measures quantity. An example is the unit of measurement devised by the International Accreditors for Continuing Education and Training known as a Continuing Education Unit (CEU).⁴⁵ One CEU is awarded for 10 hours of learning. There are other types of CEU in use around the world and the units of measure may differ
- outcomes that record achievements, the quality of learning, and application to practice

Evidence of completion of CPD requirements may be mandated by regulatory authorities, professional organisations, or governmental licensing boards that may require a self-declaration of learning. They may regularly and randomly audit the amount and type of learning (seminars, lectures, demonstrations, conferences, papers read and written, and so on) that has been completed. Audits require the submission of evidence that CPD activities have been carried out within a designated period of time. With an outcome-based approach, the registrant may be expected to provide a piece of reflective writing that examines what impact the learning has had on them and how the learning has been applied to their practice.

Academic institutions can award academic credits for CPD activities ranging from short courses to a full master's degree. A set number of credits at a specific qualification level is attached to the course or programme and is awarded to the individual student on achievement of the learning outcomes (some providers use objectives) by passing the assessments. This also means that CPD activities with academic credits require enrolment and registration at the academic institution that offers them. In some instances, these academic credits can be added together for the achievement of a larger award such as a diploma or degree. Queries about the academic credits, and their value or transferability, should be directed to the relevant academic institution or course provider.

Ensuring quality of CPD

Expectation of the CPD activity

To meet the quality standards each CPD activity should be consistent with national policies and relevant World Physiotherapy policies and guidelines including ethical principles and standards of physiotherapy practice. CPD is planned in response to the needs identified for a particular group of physiotherapists. Specific learning outcomes should be clearly outlined to respond to the identified needs. The CPD activity title should adequately represent the programme's content.

Programme content and teaching methods should be planned by appropriately qualified individuals: qualified physiotherapists, or other health professionals; experts in fields associated with the practice of physiotherapy (such as lawyers, health administrators, philosophers); and individuals with specific relevant experience, for example, expert clients. Knowledgeable and responsive instructor(s) with current expertise in the field and competence in facilitating professional learning are essential for high quality CPD. Instructors must disclose, in advance of the programme, any bias or proprietary interest in any product, device, service, or material discussed during the programme. They should also identify any conflict of interest, for example, sponsorship by a company providing a product.

The content should be based on referenced scientific evidence, should reflect evidence in practice, and should clearly label personal experience or hypotheses. Learning materials should be comprehensive and up to date, with references to bibliographic and original peer-reviewed research appropriate to the programme content.

CPD providers should ensure a physically and psychologically safe and supportive learning environment, cognisant of their legal liabilities. Learning environments should be accessible and conducive to interactive learning. CPD should include methods to evaluate a participant's attainment of the specified learning outcomes, as well as evaluation for the CPD activity itself.

Making information about the CPD available

The CPD provider should make information available to potential participants that includes: a course description (with the amount of time designated to each content area and the total number of hours required to complete it); a list of course presenters (their qualifications for delivering the course should be included in the information package); the target audience for the CPD offering (along with the prerequisites and requirements for entry to, and successful completion of, the CPD offering); information about whether CEUs are offered (and on what basis, as well as an indication of whether certificates of completion that record the award of CEUs will be provided); and information about the learning resources that will be provided. All of this information should be provided in CPD promotional materials.

Promotional materials and brochures should also include the maximum number of participants for a laboratory/demonstration course, information about the fee, and a statement about the provider's fees and cancellation policy. They should also include the CPD provider's contact details and may also include former attendee endorsements of the programme.



Credit: © Hardy Skills/HI



Appendices

Appendix 1. Approaches to physiotherapist competence

In the table below domains of physiotherapist competence as described in the Physiotherapist education framework are mapped out on various competence frameworks adopted by member organisations.

World Physiotherapy Description	Expected minimum competences for an entry level physiotherapist in the European region ⁴⁶	Competency profile for physiotherapist in Canada ⁴⁷	Professional profile and competences of physiotherapist in Colombia ⁴⁸ (domains)	Physiotherapy practice thresholds in Australia and Aotearoa New Zealand ²⁶
Physiotherapy assessment and intervention	General competences: assessment diagnostic, intervention competences, health promotion and prevention competences	Physiotherapy expertise	Professional reasoning, all competences are related to clinical practice, physical activity and sports, health and work, education, public health and social management	Physiotherapy practitioner
Ethical and professional practice	Professional and interprofessional competences	Professionalism	Professionalism and ethics. Professional reasoning	Professional and ethical practitioner
Communication		Communication	Communication	Communicator
Evidence-based practice	Research and evidence-based competences	Scholarship	Evidence-based practice and research	
Interprofessional practice	Professional and interprofessional competences	Collaboration	Professional reasoning, all competences are related to clinical practice, physical activity and sports, health and work, education, public health and social management	Collaborative practitioner
Reflective practice and lifelong learning	Education and learning competences		Professionalism and ethics	Reflective practitioner and self-directed learner
Quality improvement			Administration and management	
Leadership and management	Management competences	Leadership management	Administration and management	Manager/leader
	Education and learning competences			Educator

Appendix 2: Curriculum alignment

Domain 1 Physiotherapy assessment and intervention		Competence: Physiotherapist is able to plan and conduct a comprehensive client-centred assessment, and physiotherapy examination of the client (or needs of a client group) including socio-economic, personal, and environmental factors, screening for differential diagnosis
1.1 Activity		Plan and conduct a structured, comprehensive client-centred assessment and physiotherapy examination of the client, or needs of a client group
Learning Outcomes		
1.1	By the end of this course the student will be able to: <ul style="list-style-type: none"> conduct a structured, comprehensive client-centred assessment and physiotherapy examination 	
		Possible content
1.1.1	Interview clients and obtain a history from them and from other relevant sources	<ul style="list-style-type: none"> interviewing skills history taking including general demographics, social history, employment, growth and development, living environment, general health status, social/health habits, family history general demographics (age, sex, gender, race/ethnicity, primary language, education) social history (cultural beliefs and behaviours, family and caregiver resources, social interactions/activities/support systems) employment – work/job/school/play (current and prior work; community and leisure actions, tasks, or activities) growth and development (developmental history, hand dominance) living environment (living environment, community characteristics, devices and equipment, projected discharge destination) general health status – self-report, family report, caregiver report (general health perception, physical function, psychological function, role function, social function) social/health habits (behavioural and health risks, level of physical fitness) family history (familial health risks)
1.1.2	Examine clients by performing system reviews	<p>System reviews may include brief assessments of the following systems and the use of assessment outcomes to support physiotherapy interventions:</p> <ul style="list-style-type: none"> cardiovascular/pulmonary systems - blood pressure, heart rate, respiratory rate, assessing for oedema, the effectiveness of coughing effort, oxygenation and ventilation status musculoskeletal system - gross range of motion, gross strength, gross symmetry, height, weight neuromuscular system- gross coordinated movements, for example, balance, locomotion, transfers, and transitions integumentary system - the presence of any scar formation, the skin colour, the skin integrity screening for differential diagnosis it may also include assessment of communication, behavioural/emotional state, cognition, language and learning style

		Possible content
1.1.3	Examine clients by selecting and administering (age and culture) appropriate tests and measures	<p>Tests and measures may include:</p> <ul style="list-style-type: none"> • aerobic capacity/endurance - may include assessment of aerobic capacity during functional activities and during standardised tests • cardiovascular signs and symptoms during exercise or activity • pulmonary signs and symptoms during exercise or activity
1.1.4	Use hypothetico-deductive strategies to determine the specific selected tests and measures	<ul style="list-style-type: none"> • anthropometric characteristics may include assessment of body composition, body dimensions, oedema • arousal, attention, cognition, communication, orientation, consciousness, recall • assistive technologies and adaptive devices - devices and equipment, components, remediation of impairments, functional limitation, disabilities, safety
1.1.5	Formulate a short list of potential diagnosis or actions from the earliest clues about client	<ul style="list-style-type: none"> • circulation (arterial, venous, lymphatic) - signs, symptoms, physiological responses to positions • cranial and peripheral nerve integrity - motor and sensory distribution of nerves, response to neural provocation, response to stimuli, electrophysiological testing • environmental, home and work (job/school/play) barriers - current and potential barriers, physical space, and environment
1.1.6	Perform specific tests and measures that reduce the selection of the tests and measures	<ul style="list-style-type: none"> • ergonomics and body mechanics - dexterity and coordination during work, functional capacity during work, safety during work, specifics of work conditions, work tools, devices, equipment, body mechanics during self-care, home management, work, community and leisure (with and without assistive, adaptive, orthotic, prosthetic, protective, and supportive devices and equipment)
1.1.7	Utilise reliable and valid tests and measures whenever possible and available, and use results to inform physiotherapy interventions	<ul style="list-style-type: none"> • gait, locomotion, and balance - static and dynamic balance, balance during functional activities, gait and locomotion during functional activities with and without devices or equipment, safety during gait, locomotion and balance • integumentary integrity - activities, position, postures, devices, and equipment that produce or relieve trauma to skin • burn, signs of infection, wound and scar characteristics • joint integrity and mobility - joint play movementsmotor function (motor control and motor learning) - dexterity, coordination and agility, hand function, control of movement patterns, voluntary postures • muscle performance - muscle strength, power and endurance, muscle tension/tone • neuromotor development and sensory integration - acquisition of motor skills, oral motor function, phonation and speech, sensorimotor integration including postural, equilibrium, and righting reactions

		Possible content
1.1.3	Examine clients by selecting and administering (age and culture) appropriate tests and measures	Tests and measures may include (continued) : <ul style="list-style-type: none"> • orthotic, protective, and supportive devices - components, alignment and fit, use during functional activities and sport-specific activities, remediation of impairments, functional limitations and disabilities, safety during use • pain - type, location, and severity (irritability, intermittent/constant, quality, pattern, duration, time, cause), soreness, nociception
1.1.4	Use hypothetico-deductive strategies to determine the specific selected tests and measures	<ul style="list-style-type: none"> • posture - static and dynamic postural alignment and position • prosthetic requirements - components, alignment, fit and ability to care for prosthesis, use during functional activities and sport-specific activities, remediation of impairments, functional limitations and disabilities, residual limb or adjacent segment, safety and comfort during use • range of motion - functional range of motion, joint active and passive movements, muscle length, soft tissue extensibility and flexibility
1.1.5	Formulate a short list of potential diagnosis or actions from the earliest clues about client	<ul style="list-style-type: none"> • reflex integrity - deep and superficial reflexes, postural reflexes and reactions, primitive reflexes and reactions, resistance to passive stretch • self-care, independence, and home management - activities of daily living (ADL) and instrumental activities of daily living (IADL) for self-care and home management, ability to gain access to home environment, safety during self-care and home management
1.1.6	Perform specific tests and measures that reduce the selection of the tests and measures	<ul style="list-style-type: none"> • sensory integrity - combined/cortical sensations, deep sensations • ventilation and respiration/gas - pulmonary signs of respiration/gas exchange, pulmonary signs of ventilatory function, pulmonary symptoms • work (job/school/leisure or play), community and leisure integration, or reintegration - ability to assume or resume work, community and leisure activities, ability to gain access to work community and leisure environments
1.1.7	Utilise reliable and valid tests and measures whenever possible and available, and use results to inform physiotherapy interventions	<ul style="list-style-type: none"> • safety in work, community and leisure activities, and environments

Appendix 3: Description of physiotherapy academic staff

Characteristics	Academic staff role				
	Programme lead	Core academic staff	Practice education director/ coordinator	Practice education site supervisor/ educator	Associate academic staff
Is a physiotherapist	✓	Yes, unless teaching content where other expertise is required, e.g. exercise physiology, surgery	✓	Yes, some aspects of student clinical experience may be supervised by members of other professions	Not necessarily
Is a member of World Physiotherapy MO in the country	✓	Yes, if physiotherapist	✓	✓	Yes, if physiotherapist
Demonstrates active involvement in professional organisation	✓	Desirable	Desirable	Desirable	Desirable
Gives evidence of an appropriate academic qualification	PhD, EdD, ScD, DSc desirable. Qualification in management / leadership desirable	Post professional degree desirable. If not a physiotherapist, has an appropriate degree for area of teaching	Post professional qualification in physiotherapy or related field; three years of clinical experience in a variety of settings; previous teaching experience	Professional degree in physiotherapy. Post professional education desirable	Professional degree in physiotherapy or other appropriate degree for area of teaching. Post professional qualification desirable
Externally recognised expert in their area of teaching and research	✓	Desirable	Desirable	Desirable	Desirable
Demonstrates contemporary expertise in their area of programme responsibility	✓	✓	✓	Yes, a minimum of one year's clinical experience	✓
Gives evidence of an appropriate qualification in learning and teaching	✓	✓	Desirable	Desirable	Not necessary

Characteristics	Academic staff role				
	Programme lead	Core academic staff	Practice education director/ coordinator	Practice education site supervisor/ educator	Associate academic staff
Demonstrates effective teaching and student evaluation skills	✓	✓	✓	✓	✓
Is typically an employee of higher education institution	✓	✓	✓	Formal affiliation or appointment at institution desirable	Not necessary
Is a tenured / employed permanent physiotherapist member of academic staff of physiotherapy programme	✓	✓	Desirable	Desirable	No
Is clinically practising	If possible	If possible	If possible	✓	Not expected
Has had a previous role as a clinical educator of physiotherapy students	Not expected / desirable	Desirable if physiotherapist / not expected	Yes	Desirable but not expected / desirable	Not applicable
Demonstrates understanding of contemporary practice, quality practice education, clinical community, and health system	✓	Yes, if physiotherapist	✓	✓	Yes, if physiotherapist
Demonstrates ongoing CPD consistent with professional and programme requirements	✓	✓	✓	✓	✓
Has a well-defined scholarly agenda	✓	✓	Desirable but not expected	Desirable but not expected	✓

Characteristics	Academic staff role				
	Programme lead	Core academic staff	Practice education director/ coordinator	Practice education site supervisor/ educator	Associate academic staff
Contributes to physiotherapist entry level curriculum development	✓	✓	✓	Yes, may offer a clinical perspective on aspects of the curriculum	✓
Has a record of service consistent with expectations of the physiotherapy department and the education institution	✓	✓	✓	Desirable but not expected	✓
Participates in governance of the institution	✓	Desirable	Desirable but not expected	No	Not expected
Possesses contemporary expertise in management and leadership	✓	Desirable but not expected	Desirable	Not expected	Not expected
Has previous experience as a member of academic staff	✓	Desirable but not expected	Desirable but not expected	Not expected	Not expected

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Glossary

Academic standard

Accreditation

Advanced practice

Assessment

Associate faculty

Bachelor's degree

Client

Collaborative learning

Collaborative practice

Competence

Continued competence

Continuing education units (CEUs)

Continuing professional development (CPD)

Core academic faculty

Curriculum development

Digital practice

Doctoral degree

Education threshold

Guidelines

Health

International Classification of Functioning, Disability and Health (ICF)

Interprofessional

Intervention

Learning outcomes

License/registration

Master's degree

Member organisation

Patient

Physiotherapist

Physiotherapist entry level education programme

Physiotherapy

Policy statements

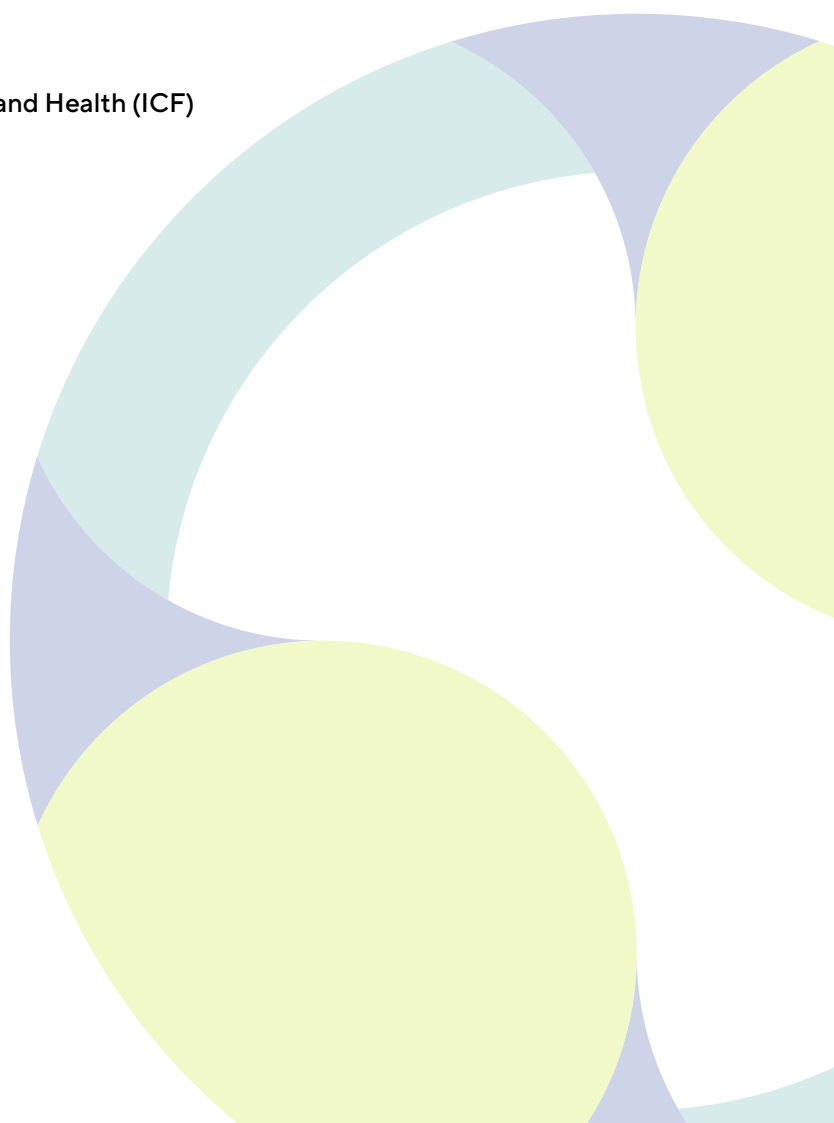
Practice settings

Qualification

Quality assurance

Regulation

Self-directed learning





World Physiotherapy
Unit 17
Empire Square
London SE1 4NA

Phone +44 (0)20 8159 5130
Email info@world.physio
Web www.world.physio
Social @WorldPhysio1951

