Rehabilitation as a Curricular Construction

Per Koren Solvang and Marte Feiring

Abstract

Rehabilitation is a contested interdisciplinary field, torn between medical dominance and psychosocial challenges. Since higher education is an important arena for epistemological work, this chapter elucidates the scholarly profile outlined in programs addressing rehabilitation. The authors conducted a text study of how programmes in Scandinavia, the UK, and Germany are presented. Four types of study programmes were identified: physiotherapy-based, interdisciplinary programmes, educational counselling programmes, and veterinary programmes. The diversity of programmes is discussed in light of Bourdieuan perspectives on field struggles in academic settings, the Mode 2 type of knowledge production at the intersection between clinical practice and academia.

12.1 Introduction

Rehabilitation is a contested interdisciplinary practice. In some academic networks, influences from social science and disability activism are perceptibly on the rise; in other networks, a strong commitment to clinical trials for improving functioning holds the leading epistemological position. A few studies have addressed the difficulty in defining rehabilitation (Feiring and Solvang 2013; Reinhardt et al. 2007; Solvang et al. 2017; Whyte 2008). How it is framed for emerging professionals enrolled in training programmes is important in terms of the development of rehabilitation as a professional practice. Despite this importance, though, a question seldom addressed in the literature is how rehabilitation is understood within higher education. A few contributions do exist. For example, Stucki and Celio (2007) outlined a framework for the development of academic programmes in human functioning and rehabilitation. Their aim was to stimulate reflections on the development of research training programmes. Similarly, Whyte (2005) addressed the need for training academic researchers and considered which areas of competence are rendered relevant. However, neither of these prior contributions addressed how rehabilitation is actually understood in the development of curricula, in relation to both programmes that qualify for practice and those that qualify for research careers. This lacuna prompts the following research question and focus of this chapter: How is the scholarly profile outlined in programmes in which rehabilitation constitutes a core component? The knowledge gained in answering this question will deepen our understanding of the epistemological patterns in the field of rehabilitation.

Rehabilitation is a composite set of practices constructed by a wide set of actors. National and transnational professionals and governmental organizations are important agents; patient organizations play a role as well. A recent contribution to the multidimensional and interdisciplinary understanding of rehabilitation outlines a matrix of actors positioned on different levels of the social structure (Sol-

This is a post-peer-review, pre-copyedit version of a book chapter published in New dynamics of disability and rehabilitation: Interdisciplinary perspectives.
The final authenticated version is available online at: https://dx.doi.org/10.1007/978-981-13-7346-6_12

vang et al. 2017); the three types of actors in this model are service users, professionals, and governmental authorities. Expanding on this model, we suggest considering educators as a fourth type of actor, at the intersection between professionals and governmental authorities (see Table 12.1).

Table 12.1 Matrix of Key Agents and Levels of Society in Rehabilitation

Levels	Agents			
	Individuals experiencing disabilities	Clinical professionals	Educators	Governmental authorities
Micro	(1) Making life-world decisions relevant to rehabilitation	(2) Improving clients' level of functioning, participation, and wellbeing	(3) Teaching and assisting students in learning	(4) Governing citizens by expecting active care for own health and a strong work ethic
Meso	(5) Acting as service user representatives	(6) Organizing hospitals, local rehabilitation units, and rehabilitation chains	(7) Designing curricula and developing scholarly profiles	(8) Promoting efficient, accessible, and high-quality services
Macro	(9) Associations acting as advisory bodies and pressure groups	(10) Professional associations negotiating jurisdiction	(11) Contributing to the development of educational policies	(12) Securing democratic foundation of policy formation and just distribution of services

Adapted and extended from Solvang et al. (2017, p. 1985).

This chapter focuses on the educators' meso-level activities – those captured in cell (7) of Table 12.1. Educators working at universities and university colleges teach rehabilitation. This teaching is situated inside a wide variety of study programmes, such as physiotherapy, occupational therapy, social work, and nursing, to name a few (Stucki and Celio 2007). According to most definitions of the term, rehabilitation is depicted as an interdisciplinary endeavour (Albrecht 2015). How this interdisciplinarity is composed will vary, partly because of the epistemological struggles in the field of rehabilitation and partly through the institutional settings that offer study programmes addressing rehabilitation. To deepen existing knowledge about how the interdisciplinary practices of rehabilitation are understood in educational settings, this chapter will present a study of programmes that include 'rehabilitation' in their title.

Table 12.1 presents an analytical model identifying three intersectional levels of society (i.e., micro, meso, and macro) and four different agents (service users, professionals, educators, and governmental authorities) who also interact with one another. Rehabilitation is a cross-field in which agents and institutions pursue their interests and ambitions at various levels of society, together shaping rehabilitation both as an area of research and scholarly knowledge and as a clinical practice. Table 12.1 identifies 12 intersections between different types of agents and levels of societal organization, in order to situate curricular work in the broader scope of rehabilitation as a social practice. While not exhaustive, each cell of the model identifies what are regarded as core examples of the issues important to rehabilitation. The role of an educator at a university is typically combined with that of a researcher (even if some educators only have a minor proportion of their position assigned to research), and, in this respect, they are also impacting the practice through their research dissemination. The educators are working within regulatory frameworks set by governmental authorities. The level of regulation differs, from strong in Scandinavia, with its predominantly state-owned universities and colleges, to weaker in the United States, which has a large proportion of private educational institutions (Bleiklie and Kogan 2007).

The chapter will analyse the curricula of key rehabilitation programmes in higher education in the Scandinavian countries, the United Kingdom, and Germany. The overall framework is the sociological study of knowledge – particularly the 'Mode 2' concept developed by Gibbons and colleagues (1994). This perspective highlights the emergence of inter- and transdisciplinarity and the involvement of users (patients and relatives) in knowledge production. As a more specific theoretical lens, Bourdieu's concept of cultural capital in the study of higher education will also be applied (Bourdieu 1988). The empirical design includes all present study programmes in rehabilitation at the graduate and postgraduate level. Curricula, reading lists, scholarly profiles of key teachers, and the nature of institutions/departments compose the key data collected. The textual information is then evaluated by applying a theory-driven content analysis. The subsequent discussion addresses differences and similarities between the countries studied regarding the scholarly profile of the respective programmes, with special attention paid to transdisciplinarity.

12.2 Analytical Perspectives

The revision of the International Classification of Functioning, Disability and Health (ICF) by the World Health Organization (WHO) in 2001 had a significant impact on the understanding of disability and rehabilitation in health and social services provision (World Health Organization 2001). The social model of disability was, to a certain degree, implemented (Bickenbach et al. 1999), instigating what has since been labelled both a 'social turn' (Solvang 2012) and a 'paradigm shift' (Reinhardt 2011) in rehabilitation. From being a medically dominated practice, rehabilitation has developed in such a way that psychology and sociology are no longer on the outskirts of the field but at its very heart. Thus, there is a medical- and pedagogical-dominated 'before' and a psychology- and social science-oriented 'now'. A specific interdisciplinary understanding of rehabilitation has been constructed by the ICF model development coordinated by the WHO, but this conceptualization is contested because of the variety of perspectives involved (Albrecht 2015). Hence, rehabilitation can be seen as a contested field of scholarship and practice that takes many forms. One perspective relies on predominantly health science-orientated conceptions, highlighting functioning as the outcome of interest (Stucki et al. 2018). This approach is echoed by the WHO, which defines rehabilitation as 'a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment' (World Health Organization 2017, p. 1). The definition is followed up by a recommendation to organize rehabilitation as part of the health sector. Another scholarly position applies models that open up rehabilitation to perspectives from critical disability studies. In this latter group of models, all aspects of human existence, from the physical to the psychological (including social, relational, and indeed existential), are included (Gibson 2016; McPherson et al. 2015). Following this type of approach, the relevance of organizing rehabilitation as part of the health sector is not so obvious, and the governmental bodies of social services and education could equally well be possible sites for the organization of rehabilitation services. Both scholarly positions are interdisciplinary, but they apply different combinations of knowledge types in their framing of rehabilitation.

Bourdieu's theoretical concept of 'cultural capital' lends itself as a sensitizing device with which to understand the struggles of knowledge in defining rehabilitation. Cultural capital is embodied in the form of mental dispositions within which scholarly orientations, definitions, and professional competences can become subsumed; and in objectified and institutionalized forms, such as course books,

instruments, and technologies, as well as educational programmes and formal qualifications (Bourdieu 1986. The cultural capital concept provides a framework in which to set our study's ambition to ascertain how rehabilitation is represented in educational programmes. In turn, their scholarly profile will influence which forms of knowledge and approaches are legitimate to draw upon in the actual rehabilitation practice.

According to a perspective from the sociology of knowledge, there has been a trend for the production of knowledge to migrate from autonomous universities to hybrid institutions where user steering plays a large role (Gibbons et al. 1994; Nowotny et al. 2001). This tendency is seen as a move from 'Mode 1' to 'Mode 2', following which the archetypical Mode 1 institutions – the universities – now reflect the Mode 2 society, by interacting more strongly with their surroundings. These developments set the scene for the growth of study programmes in rehabilitation that are prone to combinations with other specialties, such as geriatrics, and applications to certain social sectors, such as inclusion in working lives.

Analysing academic institutions, Bourdieu (1988) identified two opposing hierarchies, one based on social networks and economic capital (the 'heteronomous hierarchy') and the other on cultural forms such as scientific knowledge and autonomous research (the 'autonomous hierarchy'). Rehabilitation seems to correspond to a heteronomous hierarchy, because, at an institutional level, it has many intersections with other specialties, such as pedagogics, social work, and sociology, as well as towards governmental health policies and disability activism (Feiring and Solvang 2013). Furthermore, in recent years, the educational system has also migrated towards Mode 2. Students are not only expected to seek wisdom, but also to qualify for competences required in the labour market. Universities try to compete for the students and design study programmes intended to attract prospective applicants. Through these processes, a diverse set of interdisciplinary study programmes is developed, reflecting a scholarly development typical of Mode 2 by promoting combinations that are attractive to prospective students pursuing a career as part of their working lives. The emergence of part-time programmes serving students seeking further education adds to the trends actualizing Mode 2.

These trends in higher education are part of the overall shift labelled by the sociology of knowledge as a change from Mode 1 to Mode 2. The production of knowledge migrates from autonomous universities to hybrid institutions where knowledge interests voiced by practitioners play a large role (Gibbons et al. 1994; Nowotny et al. 2001). Such processes are disputed by, for example, university boards highly influenced by representatives of private companies (Greenhalgh and Wieringa 2011). Nonetheless, these trends are increasingly setting the scene for the development of study programmes in rehabilitation that are inclined towards combinations with other specialties, such as geriatrics, and applications to certain social sectors, such as 'work life inclusion'.

12.3 Methodological Approach

The understanding of the curricular work in this study is based on texts published on university websites. These texts are situated in an institutional context. They take the form they do to accomplish a specific task (Mik-Meyer 2005), with the task of the texts at hand being to provide information to prospective students, and, in some cases, to employers assigning employees permission to enrol in a part-time study programme. These texts are also prone to being framed by university guidelines for

presentation, typically highlighting the educational institution as innovative and attuned to the demands of working life.

Three geographical areas were strategically chosen for the study that echo the Northern European perspective of this book. Germany and the United Kingdom are leading countries in Europe in the health and social sciences, while Scandinavia represents important innovations in rehabilitation, introducing a version of the social model of disability at an early stage (Tøssebro 2004). As the aim of the present study is to highlight the role of educational institutions in rehabilitation – and not to provide a complete picture of how educational institutions work with rehabilitation – the use of three strategic geographical areas should not be considered a limitation of the study's design. To the contrary, a small number of cases such as this allows for an in-depth focus on the variety of conceptualizations of rehabilitation that can be found.

The selection of educational studies followed two requirements: (1) 'rehabilitation' had to be part of the name of the programme, but not necessarily the sole designator; (2) the programme had to be directed towards working with humans.[1] Both bachelor's and master's programmes are included, as well as PhD programmes. The key method for finding study programmes was through advanced Google searches. The search term 'rehabilitation' and 'university' were put into the search engine and the search was restricted to one country at a time. Common terms in the local languages were applied as well. The pages of matches were combed through until no new study programmes appeared. The listing typically had only study programmes on the first 10 to 20 web pages retrieved. Eventually, new study programmes stopped being uncovered. For the UK-based searches, this took place around retrieved page 100; in the Scandinavian countries, around retrieved page 30. Additional information was collected by contacting programme heads who were willing to set aside time to engage in e-mail correspondence. This information was restricted to reading lists. We cannot be certain that our list of study programmes is complete; some programmes may have slipped under our radar, but there is no indication that a high number of them will have done so.

The analysis was conducted through an open reading of all studies as presented on the websites. As a second stage, the texts were read as representations of rehabilitation and as representations of organizing higher education. Three categories emerged out of this reading. First, the countries are an organizing framework in the way that national profiles emerge. Second, the health–social science

[1] Bachelor of Science degrees in animal rehabilitation offered by four British colleges and universities were excluded from the study programmes selected for analysis because they did not deal with humans. However, recent advances in disability studies have been giving attention to the intersection between animality and disability. This is not about using references to animals derogatively when giving negative evaluations of disabled people (Carlson 2009); from the post-humanist perspective, the intersection between disability and animality is infused with positive values. One much-cited example is that of Temple Grandin, a U.S. professor of animal science and consultant to the livestock industry, who considers her ability to understand animal needs to be closely related to herself being on the autism spectrum (Wolfe 2010). The post-humanist perspective decentres the human and ascribes heightened status to animals, and, following this line of thought, animal rehabilitation may deserve a place in the study of the curricular construction of rehabilitation. Indeed, the animal rehabilitation programmes also use concepts such as 'rehabilitation' and 'nursing', and, through the rehabilitative approach, they somewhat humanise animals. Nonetheless, the programmes are institutionally framed by the veterinary sciences.

continuum emerged as an important framework for analysis. Third, study organization is clearly important. There is one body of studies that comprises on-campus bachelor's-level studies, and another that incorporates post-graduate programmes, offered both as on-campus full-time programmes and off-campus part-time programmes.

12.4 Results

An overview of the number of study programmes is given in Table 12.2. If we take into consideration the number of inhabitants in the countries, Scandinavia (11 million) and the UK (65 million) offer a comparable number of study programmes. With its 82 million inhabitants, Germany has the smallest representation of study programmes in relative terms. Furthermore, using the programme title as our instrument for identifying programmes, we infer that rehabilitation is far more prevalent in the curricula in Scandinavian and UK universities and colleges, compared to those in Germany. Most of the 17 Bachelor of Science programmes identified in the United Kingdom concern sport rehabilitation, a branch of physiotherapy that in many UK universities is organized in the form of a designated study programme. If we set these aside, the Scandinavian countries stand out as having the strongest focus on rehabilitation when measuring by programme name, and hold the number relative to the size of the country.

Table 12.2 Study programmes with 'rehabilitation' in their title in the Scandinavian countries, Germany, and the United Kingdom, distributed by educational level

	Scandinavia	Germany	UK
BSc	1	3	17
MSc	6	6	11
Total	7	9	28

When we look at the key disciplines involved in the composition of rehabilitation as a university degree, three clusters emerge. The first is a cluster of programmes closely attuned to physiotherapy. Here, there are a large number of British universities providing Bachelor of Science degrees in sports rehabilitation. In addition, there are several Master of Science programmes in which rehabilitation is situated within physiotherapy and orthopaedics, and many of these only admit certified physiotherapists. Second, there is cluster of programmes that aim at interdisciplinarity. Even if they are located within departments of health, the physiotherapy and health aspects are downplayed to the advantage of psychology and social science. Students enrol of these programmes from several professional backgrounds. Most of the Scandinavian programmes are situated in this cluster. Third, there is a cluster of programmes that situate rehabilitation within counselling and educational sciences. These are typically located at departments of special education in Germany. In sum, the curricular understanding of rehabilitation is framed by clusters within which the nodes are physiotherapy, interdisciplinarity, and educational sciences. In the following subsections, we take a closer look at each of them.

12.4.1 Physiotherapy

The BSc sports rehabilitation programmes are based in UK, but one MSc programme is offered at a German university. There are a total of 17 such programmes. They are typically offered together with BSc programmes in physiotherapy. In this way, they represent a specialization track in physiotherapy, and apply the concept of rehabilitation in a process of framing what characterizes the role of physiotherapy in sport. They of course feature a strong component of musculoskeletal themes, as well as skills in advising the individual. Most degree programmes make visible a biopsychosocial approach wherein the physical body is understood in the context of psychosocial approaches.

The physiotherapy-dominated MSc programmes have a strong focus on the functioning of the body. Courses typically address questions about anatomy, musculoskeletal functioning, ergonomics, and biomechanics. Exercise and training is also a key part of the courses offered. The programmes are situated in health departments. Subjects related to the organization of the rehabilitation process are also part of the curriculum. These typically focus on principles of evidence-based medicine, clinical governance, and, to some degree, skills in interpersonal communication.

There are also a variety of specialization programmes, such as cancer rehabilitation and cardiovascular rehabilitation. Some of these are situated in physiotherapy departments and have a strong focus on exercising and giving advice to clients in a process of rehabilitation. Other programmes are situated in technical faculties, such as programmes for visual rehabilitation and those for amputation and prosthetic management.

12.4.2 Interdisciplinarity

The interdisciplinary cluster of study programmes are not fully removed from physiotherapy. Several are situated in physiotherapy departments. However, they are open for all health Bachelor of Science degrees and to a variety of social work and educational science BSc programmes. Accordingly, they create an interdisciplinary arena, as expressed by Oxford Brookes University in the following statement from its website:

> It provides you with the opportunity to challenge and critically evaluate your multi-professional and uni-professional clinical expertise in order to respond to the current and future needs of rehabilitation. You will have opportunities to work with practitioners from different professions, different patient and client groups, and a variety of countries – providing diverse views of rehabilitation.

Several of the courses offered in the interdisciplinary cluster of studies are leaning towards psychology, sociology, and even critical disability studies. The influence from social science and disability activism on rehabilitation is at its most pronounced among Canada- and Oceania-based scholars (Gibson 2016; Hammell 2006; McPherson et al. 2015). Disability studies has been picked up by two of the programmes – the ones at University of Southern Denmark and Oslo Metropolitan University, where the writings of the Canadian and Oceanian scholars hold a prominent position on the reading lists.

The interdisciplinarity is characterized by what seems to be an ambition to build programmes that combine the clinical trial-dominated paradigm and the paradigm strongly influenced by critical disability studies. One example is the programme at University of Southern Denmark, where the rehabilitation paradigm mirrors the disability studies approach while courses on ideal trajectories and economics represent the clinical approach. This multiparadigmatic approach is reflected in the reading

list, too, where both McPherson et al.'s (2015) *Re-thinking Rehabilitation* book is obligatory as well as Derek Wade's row of editorials in *Clinical Rehabilitation* *(Wade 2015).

In Scandinavia, a salutogenetic health promotion focus features strongly in several study programmes. In Sweden, for example, both identified programmes are oriented towards working life rehabilitation: 'When you study Health and Rehabilitation in Work Life, you will learn to promote health, prevent ill health, and engage in rehabilitation in the best way possible' [our translation]. Thus, rehabilitation is framed as an integrative part of a broader understanding of health, wellbeing, and participation. This approach corresponds with the policy trend discussed by Anne-Stine Røberg in chapter 6 of this volume in which prevention tends to given more attention than rehabilitation in white papers and governmental strategy documents. It is also worth noting that both Swedish programmes are directed towards work life inclusion. In effect, in Sweden, as a programme name designator, 'rehabilitation' seems to be restricted to knowledge building and professional practice in working lives.

12.4.3 Educational Sciences

The cluster of programmes that situates rehabilitation within counselling and educational sciences is currently only found in Germany, and three of the programmes we identified even present themselves as being closely interrelated. The Humboldt University of Berlin states on its web pages:

> Besides Cologne and Dortmund is the Department for Rehabilitation Sciences at the Humboldt University of Berlin, offering a wide-reaching rehabilitation education from the pre-school phase through to work life inclusion and into the assistance offered to chronically ill, disabled, and old people.

They apply a life course approach and voice a multidisciplinary perspective by highlighting a knowledge base grounded in medicine, psychology, sociology, and educational sciences, as well as law and professionalization. Issues such as disability studies, communication, and language are commonly featured. One much-used course book is edited by Baumann et al. (2010) and titled *Rehapädagogik, Rehamedizin, Mensch*. It presents an interdisciplinary fusion between medicine and educational sciences; the child is understood as being socially situated, building on perspectives from interpretative sociology, and as acting in challenging environments, building on psychological concepts such as resilience and salutogenesis.

Pedagogics is the main reference point for this cluster of study programmes. The competence building has a goal of supporting disabled individuals within social service and health systems. Students develop an ability to plan diagnostic processes and follow them up. Knowledge about the legal system and institutional frameworks for rehabilitation is also a key goal. The entry requirement to the master's programmes is a bachelor's degree in educational sciences. The programmes are situated in departments of education at faculties of social science and humanities. As stated in the quotation above, the programmes at the Humboldt University of Berlin belong to the Department of Rehabilitation Sciences, but also adhere to the educational framework by being situated in a discourse of rehabilitation pedagogics. The German group of rehabilitation studies also comprises programmes for the deaf and hard-of-hearing rehabilitation pedagogics. The programme at the Ludwig Maximillian University of Munich is categorized as language and cultural sciences, and there is even a specialization in sign language interpretation – indeed a far-reaching concept of rehabilitation.

12.4.4 Programme Structure and Pedagogics

Most of the UK and Scandinavian universities are offering the MSc programmes as part of a plethora of further education provision. Nearly all of them offer a part-time schedule, some of them so flexible that students can work their way through the programme in their own time on campus programmes. If they end up not doing the full degree, the courses taken will nonetheless qualify them for further education certificates. Additionally, as already noted, one body of studies comprises on-campus bachelor's degree studies, and the other encompasses post-graduate programmes offered as on-campus full-time courses or off-campus part-time ones.

All MSc programmes have a form of research assignment or thesis to be completed. At several of the British universities, the programme is organized along two lines, and the students must choose which to pursue: either they make an original contribution to research, or they conduct a systematic review. The courses in methods are also divided according to these two styles of knowledge building. Within this, the systematic review is seen as an integral part of what are considered relevant skills for rehabilitation. This is in line with other health programmes as well, and may be seen as reflecting a trend in which systematic reviews are given high recognition in the health sciences.

Overall, the ICF seems to be the best candidate for a common ground within the wide variety of rehabilitation study programmes, as, in most of the programmes, the ICF is in some way referred to as a subject in relation to which the student will have their competences strengthened.

12.5 Discussion

Three patterns have emerged from our analysis. In the United Kingdom, a health science-based approach with physiotherapy as a dominating scholarly force is evident. In Germany, rehabilitation as a branch of the educational sciences is well established. Finally, in the Scandinavian countries, approaches giving a position to the social sciences hold a strong position. It is important to note that these geographically framed patterns are not without exceptions. Health science-dominated programmes are found in both Scandinavia and Germany too, and at least one programme leaning towards the social sciences is to be found in the UK. There are medical, educational, and social aspects of rehabilitation in all countries. Moreover, the three national practices have complex historical roots. Taking a longer time perspective, pedagogical–psychological approaches, with parallels to those currently found in Germany, were predominant in Norway prior to World War II, while a medical–physical approach with similarities to that found in the UK, dominated in Denmark after World War II (Feiring 2009, 2016).

These findings should be considered in light of three perspectives, which are themselves based on the observation that, when analysing education sensitized by the concept of cultural capital, rehabilitation is framed by interdisciplinarity, as well as actively meeting user expectations characteristic of the Mode 2 phase in knowledge production. Thus, first, rehabilitation is used in many combinations with other subjects, mirroring a pattern wherein the understanding of rehabilitation seems to be attuned to work life demands, presumably in order to attract students. Second, rehabilitation is to varying degrees understood as representing a holistic perspective and applying the social model of disability. Third, the ICF emerges as a unifying point of reference in the study programmes in terms of the way they are presented. This particular finding may add to the scholarly discussion concerning the ICF as a boundary object for clinical rehabilitation and disability research.

In diverse ways, the programmes are attuned to the demands of working lives. First, the MSc programmes in the UK and Scandinavia are designed to attract part-time students who combine their studies with their working life roles (predominantly physiotherapists, but other professionals as well). The combination seems to lay the ground for a close interaction between work life demands and curricular offerings. One example is the thesis that can be written in close conjecture with knowledge interest from the occupational position held. Second, the full-time programmes at bachelor's level – typically, the Swedish work life inclusion programmes and the German educational counselling ones – have a strong focus on national legislation and institutional frameworks for rehabilitation. In particular, the organization of the MSc programmes opens up opportunities for interaction with practice, strongly underlining the Mode 2 framework for science and knowledge production.

It is possible to draw a dividing line between the primarily health sciences programmes and the holistic and interdisciplinary programmes. In curricular settings, the rehabilitation concept is used to denote musculoskeletal treatment and exercise programmes, typically in sports rehabilitation, and to designate broad approaches to rehabilitation incorporating disability studies as well as counselling in social work and educational science frameworks. Physiotherapy seems to dominate the health science programmes. This leaves us with the question of what has happened to the position of occupational therapy in rehabilitation. In the curricular setting, it seems that occupational therapy may be part of the qualification for interdisciplinary MSc programmes, conceivably through developing in a more holistic direction when it comes to rehabilitation than seems to be the case with physiotherapy.

The ICF is an important tool for the active and visible rehabilitation research groups in Europe, situated in a nexus between the Swiss Paraplegic Centre (in Nottwil), the University of Lucerne (also in Switzerland), and the German Institute of Medical Documentation and Information (in Cologne). It has also been suggested by sociologists and others in the field of disability studies as a boundary object. According to these scholars, disability needs to be understood as a complex interaction between characteristics of the individual, characteristics of society, and what takes place in the professional support system (Bickenbach 2012; Imrie 2004; Shakespeare 2006). Despite the fact that it acknowledges complexity, however, the ICF is contested. For example, Gibson (2016) has argued that its two main problems are that, first, it reproduces the distinction of 'normal' versus 'abnormal', and, second, the concept of impairment is seen as a biological fact and not as a phenomenon that changes over time. Nonetheless, the ICF maintains its position as an institutional framework important for the development of rehabilitation as an interdisciplinary practice in which critical disability studies is part of the mix. This position is confirmed by the curricula for programmes in rehabilitation from the three studied areas of Northern Europe.

In the introduction to this chapter, we outlined a paradigm shift in rehabilitation, and we now posit that two scholarly clusters have picked up on this paradigm shift, in different ways. The ICF nexus situated in Europe has introduced some elements of the social model of disability. The rethinking group with a foothold in Canada has taken on board a wider set of elements from the social model and the way it is developed in critical disability studies, challenging normalization as a goal for rehabilitation. In the study programmes, the milder version of the paradigm shift is dominating. In the model geared towards improvement in functioning, represented by the British programmes, the frequent mention of the ICF in the learning outcomes reflect the reforms in understanding rehabilitation depicted by the ICF. The model strongly inspired by critical disability studies can be found in some of the study programmes in Scandinavia and in the German cluster of counselling programmes institutionally framed by education. However, there are only a small number of these programmes, and the educational framing of the German programmes causes them to be strongly influenced by

learning psychology traditions. In sum, the programmes represent important trends in the development of rehabilitation as an inter- and transdisciplinary field of practice, where the ICF model of rehabilitation is predominant.

Study programmes are run by educators who are active as researchers. Hence, as teachers, they keep up to date on recent developments in their scholarly field of practice and implement these developments in various ways in the study programmes. In our study's setting, students will encounter important trends in rehabilitation – but what will be the impact on the practice of rehabilitation? Unfortunately, the current study's findings offer no data that shed light in respect of this particular question. However, when studying programme profiles, this query about impact needs to be addressed. What are the implications for practice when a scholarly profile of programmes in rehabilitation has a certain design? One way to approach this question would be to point out the high number of programmes that offer rehabilitation as a form of secondary education for students well established in their working lives. This group of students is likely to be able to implement the perspectives to which they are introduced through a position of more authority than students graduating at the bachelor's-degree level and taking up a position as a rehabilitation professional for the first time. This may be part of a general implication of the Mode 2 framework whereby knowledge production is closely attuned to the institutions of clinical practice. The academic scholarship of Mode 1 is still flourishing, but is increasingly integrated with the level of professional practice.

12.6 Conclusion

When we sought out programmes using 'rehabilitation' in their name, three outlined clusters emerged. There seems to be rather different national traditions in the curricular application of rehabilitation. Sports physiotherapy courses are framed within rehabilitation, mostly in the UK, as well as within a diverse set of health science programmes. Counselling programmes epistemologically grounded in educational sciences frame rehabilitation in Germany. In Scandinavia, interdisciplinary approaches are a clear trend, with an epistemological grounding not far from the German counselling programmes and a couple of the British programmes.

These findings tell us how rehabilitation is applied as a designator in three geographical areas in Northern Europe. Any future international overview should include other parts of the world, as well as further European countries, and it would be especially important to include Canada, the United States, and Australia, which are all leading countries in respect to rehabilitation research. A more comprehensive overview would also have been gained by including in the study courses covering rehabilitation in their programmes but that do not feature 'rehabilitation' in their programme name. Despite these limitations, however, the epistemological diversities and geographical differences in the curricular construction of rehabilitation found through the present analysis should prove useful when applied to rethinking rehabilitation as a policy and a practice.

References

Albrecht, G. (2015). Rehabilitation. In R. Adams, B. Reiss, & D. Serlin (Eds.), *Keywords for disability studies* (pp. 148–151). New York, NY: New York University Press.

Baumann, M., Schmitz, C., & Zieger, A. (Eds.). (2010). *Rehapädagogik, Rehamedizin, Mensch: Einführung in den interdisziplinären Dialog humanwissenschaftlicher Theorie- und Praxisfelder*. Hohengehren, Germany: Schneider.

Bickenbach, J. E. (2012). *Ethics, law and policy*. Los Angeles, CA: SAGE.
Bickenbach, J. E., Chatterji, S., Badley, E. M., & Ustun, T. B. (1999). Models of disablement, universalism and the international classification of impairments, disabilities and handicaps. *Social Science & Medicine*, 48(9), 1173–1187.
Bleiklie, I., & Kogan, M. (2007). Organization and governance of universities. *Higher Education Policy*, 20(4), 477–493.
Bourdieu, P. (1988). *Homo academicus*. Cambridge, England: Polity Press.
Bourdieu, P. (1986). The Forms of Capital. In Richardson, J. G. (Ed.), *Handbook of Theory and Research for the Sociology of Education (pp.241–258)*. New York: Greenwood Press.
Carlson, L. (2009). Philosophers of intellectual disability: A taxonomy. *Metaphilosophy*, 40(3–4), 552–566.
Feiring, M. (2009). *Sources of social reforms, 1870–1970: The rise of a Norwegian normalisation regime* (Doctoral dissertation, University of Oslo).
Feiring, M. (2016). Fra revalidering til rehabilitering – en dansk begrepshistorie [From 'revalidering' to rehabilitation – a Danish conceptual history]. *Tidsskrift for professionsstudier*, 24, 86–97.
Feiring, M., & Solvang, P. K. (2013). Rehabilitering – et grensefelt mellom medisin og samfunn [Rehabilitation – a boundary area between medicine and society]. *Praktiske Grunde*, 7(1–2), 73–84.
Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., & Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. London, England: SAGE.
Gibson, B. E. (2016). *Rehabilitation. A post-critical approach*. Boca Raton, FL: CRC Press.
Greenhalgh, T., & Wieringa, S. (2011). Is it time to drop the 'knowledge translation' metaphor? A critical literature review. *Journal of the Royal Society of Medicine*, 104, 501–509.
Hammell, K. W. (2006). *Perspectives on disability and rehabilitation: Contesting assumptions, challenging practice*. New York, NY: Churchill Livingstone/Elsevier.
Imrie, R. (2004). Demystifying disability: A review of the International Classification of Functioning, Disability and Health. *Sociology of Health & Illness*, 26(3), 287–305.
McPherson, K., Gibson, B., & Leplège, A. (Eds.). (2015). *Rethinking rehabilitation: Theory and practice*. London, England: CRC Press.
Mik-Meyer, N. (2005). Dokumenter i en interaksjonistisk begrepsramme [Documents in an interactionist framework]. In M. Järvinen & N. Mik-Meyer (Eds.), *Kvalitative metoder i et interaksjonistisk perspektiv* [Qualitative methods in an interactionist perspective] (pp.193–214). Copenhagen, Denmark: Hans Reitzels.
Nowotny, H., Scott, P., & Gibbons, M. (2001). *Re-thinking science: Knowledge and the public in an age of uncertainty*. Cambridge, England: Polity.
Reinhardt, J. D. (2011). ICF, theories, paradigms and scientific revolution. Re: Towards a unifying theory of rehabilitation. *Journal of Rehabilitation Medicine*, 43(3), 271–273.
Reinhardt, J., Hofer, P., Arenz, S., & Stucki, G. (2007). Organizing human functioning and rehabilitation research into distinct scientific fields. Part III: Scientific journals. *Journal of Rehabilitation Medicine*, 39(4), 308–322.
Shakespeare, T. (2006). *Disability rights and wrongs*. London, England: Routledge.
Solvang, P. K. (2012). Et faglig kryssfelt [A scholarly cross-section]. In P. K. Solvang & Å. Slettebø (Eds.), *Rehabilitering: individuelle prosesser, fagutvikling og samordning av tjenester* [Rehabilitation: Individual processes, professional development and service coordination] (pp. 15–34). Oslo, Norway: Gyldendal Akademisk.
Solvang, P. K., Hanisch, H., & Reinhardt, J. D. (2017). The rehabilitation research matrix: Producing knowledge at micro, meso and macro levels. *Disability and Rehabilitation*, 39(19), 1983–1989.
Stucki, G., Bickenbach, J., Gutenbrunner, C., & Melvin, J. (2018). Rehabilitation: The key health strategy of the 21st century. *Journal of Rehabilitation Medicine*, 50(4), 309–316.
Stucki, G., & Celio, M. (2007). Developing human functioning and rehabilitation research. Part II: Interdisciplinary university centers and national and regional collaboration networks. *Journal of Rehabilitation Medicine*, 39(4), 334–342.
Tøssebro, J. (2009). Introduction to the special issue: Understanding disability. *Scandinavian Journal of Disability Research*, 6(1), 3–7.
Wade, D. (2015). Rehabilitation – a new approach. Overview and part one: the problems. *Clinical Rehabilitation*, 29(11), 1041–1050.
Whyte, J. (2005). Training and retention of rehabilitation researchers. *American Journal of Physical Medicine & Rehabilitation*, 84(12), 969–975.
Whyte, J. (2008). A grand unified theory of rehabilitation (we wish!): The 57th John Stanley Coulter memorial lecture. *Archives of Physical Medicine and Rehabilitation*, 89(2), 203–209.
Wolfe, C. (2010). *What is posthumanism?* Minneapolis, MN: University of Minnesota Press.
World Health Organization. (2001). International Classification of Functioning, Disability and Health. Geneva, Switzerland: World Health Organization. https://www.who.int/classifications/icf/en/. Accessed 26 November 2018.
World Health Organization. (2017). *Rehabilitation in health systems*. Geneva, Switzerland: World Health Organization.