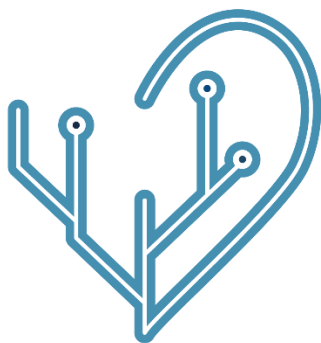


Erasmus+ TECH2MATCH

## **Reflective Practice-based Learning as an overall learning approach**



# **TECH2MATCH**

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HEALTHCARE INSPIRED BY TECHNOLOGY



## **REFLECTIVE PRACTICE-BASED LEARNING AS AN OVERALL LEARNING APPROACH**

In the same way that the philosophy of science deals with fundamental questions about what science is, how it operates, and how knowledge can be attained, an overall understanding of learning refers to how we comprehend learning and how we achieve learning. It can encompass principles, concepts, and models that attempt to illuminate how individuals acquire knowledge, skills, and behavior. Reflective Practice-based Learning is used as an umbrella concept for ways to plan and organize teaching and learning activities. The understanding of Reflective Practice-based Learning (RPL) seeks to uncover the underlying mechanisms and processes that drive learning. Since Tech2Match encompasses education from different countries, there were various ways of understanding learning, and that was precisely what strengthened the partnership. However, to develop a common course, we needed to have some form of shared understanding of what learning was as an overarching level to allow for interpretations and variations.

By grounding the course in Reflective Practice-Based Learning, the course aims to bridge the gap between theory and practice, allowing students to develop analytical skills essential for clinical decision-making. By incorporating elements of RPL, the instructor can support students' varying levels of clinical practice experience. For instance, a first-semester student may have a more limited understanding of how a patient in pain might respond compared to a sixth-semester student. This means that students can reflect on different elements at different levels within the same task. It also means that RPL can help the instructor understand the students' challenges and potentially adjust supportive questions and reflections.

The following gives examples of the fundamental pedagogical principles of Reflective Practice Learning which was used in Tech2Match.



## **1.1 The understanding of Reflective Practice-based Learning**

Healthcare students should, during their education, acquire knowledge and gain skills and competencies to, among other things, match and use the right technology for people with pain (PwP). The student should, therefore, generally learn to think and act independently (Biesta, 2011). The student should develop analytical abilities to connect theoretical reflection with actions in practice, as well as reflect on and incorporate relevant theory and knowledge at the right time. In this way, the student can justify and qualify their actions in practice. In Reflective Practice Learning, the relationship between theory and practice is fundamentally understood as dialectical, meaning that theory and practice are different but mutually dependent.

## **1.2 Fundamental pedagogical principles**

### **1.2.1 Fundamental Principal No. 1: The students' own experiences are incorporated into teaching and learning activities.**

The learning process promotes individual meaning for the students, as their own experiences are actively incorporated into the teaching and learning activities. Thus, a close link is forged to the practical phenomena that the activity focuses on. Basing teaching and learning activities on experiences differs from purely theoretical reflections and teaching activities that communicate about a certain phenomenon. For this reason, teaching and learning activities are organized to allow students to learn in and from specific situations from everyday practice that make them curious and want to learn more (Hiim & Hippe, 2007).

No. 1 - The students' own experiences are incorporated into teaching and learning activities.

An example of how this principle is incorporated in practice



The student should have some form of experience as a starting point. For instance, the overarching goal for the student might be to learn how to use telemedicine in their work as a nurse for patients with COPD (Chronic Obstructive Pulmonary Disease). An experience to work with could be, for example, having visited a COPD patient at their home and thus gaining insights into what such a patient can or cannot do. Understanding how much activity is manageable for such patients and assessing whether a patient could have the strength to, for example, weigh themselves, measure blood pressure, check blood oxygen levels, evaluate their own perceived condition, and input this information on a tablet.

Experiences could also include creating role-playing scenarios where one student portrays the role of a patient with COPD, and another student plays the role of a healthcare professional during a 'screen visit'. In these scenarios, the students draw upon their own experiences in the roles they play but also gain insights from performing simulation exercises. This involves taking on the roles of both the patient with COPD and the healthcare professional who must communicate during a computer screen visit. Learning to ask the right questions to obtain answers to what is desired. Investigating the patient's surroundings without being able to physically observe the home, but instead asking the right questions, and so on.

The key point here is that students should have some form of experience that they can apply in the learning situation/process to acquire more knowledge and reflect upon it

### **1.2.2 Fundamental Principle No. 2: Teaching and learning activities designed to include appropriate disturbances.**

This fundamental principle is based on appropriate disturbances as a means of initiating reflective thinking. Reflective thinking arises in connection with a breakdown of meaning; through disturbances that may give rise to reflection (Dewey, 2009). In this connection, it is



the lecturer's task as a more knowledgeable person to organize the teaching and learning activities to allow students the opportunity to relate reflectively to a given subject.

No. 2 - Teaching and learning activities designed to include appropriate disturbances.

An example of how this principle is incorporated in practice.

If we continue with the example of the citizen/patient with COPD living at home, the students work in groups with a written or video case involving a specific citizen/patient with COPD. The students must answer specific questions about professional examinations and treatment approaches based on the case. However, they receive ongoing additional and new information about the citizen/patient and how the citizen's disease progresses from the lector/instructor. For example, they receive information that a relative to the citizen/patient has contacted them and is dissatisfied with the healthcare professional's efforts. The relative complains about the healthcare professionals' lack of attention to the need for an emergency call – that the citizen requires a technology that can be activated in serious situations where there is an urgent need for assistance and contact with a healthcare professional. The students must now also investigate how healthcare professionals handle such a complaint and the legal frameworks under which they operate.

The point is that the instructor/lecture introduces disruptions that guide the students in specific directions they might not have explored on their own. This helps the students acquire the knowledge they need when they find themselves in real situations with the citizen/patient.



### **1.2.3 Fundamental Principle No. 3: Teaching and learning activities are organized as exploration.**

Exploration is the process of seeking to re-establish meaning in learning situations that are characterized by the breakdown of meaning as described above; not necessarily by providing clear answers to the problem, but rather through increased understanding. This involves addressing the situation, the activity, or the given curriculum in different ways – including the collection of data, the search for research- and development-based knowledge, evaluating and assessing, questions, discussions, and argumentation – from which a hypothesis can be derived that may contribute to a new understanding.

No 3 - Teaching and learning activities are organized as exploration.

An example of how this principle can be incorporated into practice.

If we continue with the same example of group work on a citizen/patient with COPD, this principle will be manifested as the students, as part of the group work, are required to search for research-based literature on healthcare work with COPD patients, including how and where Telehealth communication is incorporated. There is also a small exercise where the students must visit a COPD patient and interview them about their daily life with COPD. They gain insight into how the patient interacts with healthcare professionals. They watch a film about how healthcare professionals conduct follow-up work with these types of citizens, and subsequently, they try to perform relevant exercises on each other for follow-up work.

As part of the literature the students must read, it includes both academic literature and the experiences and narratives of citizens and relatives with the healthcare system (the students can participate in identifying the literature, incorporating both mandatory readings and exercises where they search for and find literature). The students are to explore how



healthcare professionals work, but also how patients and relatives experience being part of the healthcare system. The students themselves are tasked with exploring the treatment options available in the field and subsequently, in groups, discuss potential ethical challenges and perspectives of these treatment methods. They identify both opportunities and challenges from various perspectives.

The key point here is that the students are actively involved in identifying relevant knowledge to enhance their understanding of the topic. Together, they can develop new insights and perspectives on the subject.

#### **1.2.4 Fundamental Principle No. 4: The content of teaching and learning activities is based on the good example.**

The starting point for this fundamental principle is the fact that a reflection process requires something (a relevant practice) to reflect on. In professions, trades, and businesses – which can all be characterized as complex, ever-changing, and involving increasing amounts of information – it can be difficult to determine what the good and relevant example is. However, it is self-evident that the practical examples used in teaching and learning activities cannot be random, but that they should at least be exemplary – and perhaps even ideal. Considerations to determine what constitutes a good example are based on the exemplary principle (e.g. Klafki & Nordenbo, 1983; Wagenschein, 1951). The exemplary principle contributes to the handling of the subject matter as well as the cultivation of good working habits such as problem-examining and problem-exploring approaches.

No. 4: The content of teaching and learning activities is based on the good example.

An example of how this principle can be incorporated into practice.



Here, a good example can be a 360-degree video recording of a realistic situation from practice – from a hospital. The situation could involve communication between a healthcare professional and a seriously ill person who is frustrated and very upset. It may be challenging for the students to play in such a situation themselves and evoke a genuine atmosphere. The student may not know how a patient can react during a crisis and grief related to a deadly cancer illness. Therefore, this situation can be filmed and performed by a real healthcare professional in a real hospital setting. The patient can be portrayed by an actor (possibly another healthcare professional). In this scenario, the video recording will provide the student with a real situation and the opportunity to experience/see real surroundings, which can subsequently serve as the basis for discussions on communication techniques, ethics, and specific healthcare actions. The point here is to give the students as realistic a situation as possible to reflect upon.

#### **1.2.5 Fundamental Principle No. 5: Lecturers and students work together on learning processes.**

This fundamental principle is based on learning as a social phenomenon (e.g. Wenger, 1998). At the heart of such learning situations are interaction and cooperation, and participants are mutually dependent on each other regardless of their roles. This reciprocity entails that all participants contribute and are active. In a cooperative effort, all participants have an equal opportunity to contribute – however, not necessarily in the same way – to professional or pedagogic conceptualization, decision-making, implementation, studies, or analyses (Cook-Sather, Bovill, & Felten, 2014). This particular kind of cooperation implies that the individual experiences (cf. fundamental principle No. 1) are shared and discussed to reach new shared interpretations and understandings.



#### No. 5: Lecturers and students work together on learning processes

##### An example of how this principle can be incorporated into practice

If we take the example of the hospital video recording from earlier as a starting point, students working in a group (for example, four students) could each individually and the lecture watch this 360-degree recording of the communication between the cancer patient and the healthcare professional using VR-goggles. Here, the students could see and experience different things, as this type of recording allows, for instance, the ability to turn around and see what is on the table next to the patient and observe what is happening outside by looking out the window. This video case enables the students and the lecturer to see and experience different aspects. This forms the basis for different experiences that the students can discuss afterward together and with the lecturer – they can now work together with the same situation – but with different aspects.

#### **1.2.6 Fundamental Principle No. 6: Lecturers and students create room for dialogue.**

In Reflective Practice-based Learning, dialogue, feedback, and feedforward are seen as bridging the gap between teaching and learning. In this way, the combination of feedback and feedforward is considered a basis for a professional dialogue between the lecturer and the students. This makes it entirely different from markings in written assignments or assessments of whether the students' work is either good or poor. Feedback and feedforward are seen as dialogues with the students about their work and learning processes, and through these dialogues, the lecturer, the students, and their fellow students engage in a partnership that focuses on the quality and potential for the development of the work (Lukassen, 2018).



#### NO. 6: Lecturers and students create room for dialogue

An example of how this principle can be incorporated into practice

Based on the same video case, the students are to work on specific topics, such as concrete communication methods (verbal, and nonverbal language). The students are required to analyze both the healthcare professional's language and the patient's language based on communication theory and principles. Here, the video recording could once again serve as the basis for the instructor's evaluation of the student's analysis. The instructor could highlight new perspectives that the students may not have noticed in the video in the feedback on their communication analysis. This is done to incorporate learning and discussion into the evaluation situation itself and to create a professional dialogue.