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To cite this Article / Käytä viittauksessa alkuperäistä lähdettä:

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URL: <https://urn.fi/URN:ISBN:978-952-7266-85-4>

## 5.1 Evaluation Tools


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To enable healthcare professionals to offer effective self-management support to patients, a transformation in the mindset of healthcare practitioners from being experts to becoming coaches is essential. This transition necessitates healthcare professionals to assume a new role and acquire new competencies. This chapter outlines the assessment tools utilized to evaluate the educational programs implemented among healthcare students at partner universities in Bangladesh and Vietnam.

Self-Management Support encompasses the provision of education and assistance to individuals with chronic health conditions, as well as their families and significant others. Its goal is to help them understand their crucial role in managing their disease, make informed decisions regarding their well-being, and engage in behaviors that promote health. (Beck et al., 2017; Powers et al., 2017; Taylor et al., 2014.) While it is acknowledged that patients often face multiple self-management needs simultaneously, such as diet, exercise, stress, and substance use, certain aspects of self-management support are often addressed in isolation (e.g., nutrition or exercise), rather than being prioritized comprehensively. Additionally, healthcare professionals may be unaware of patients' priorities and available resources, which can hinder the alignment of patients' needs with healthcare professionals' preferences. (Krist et al., 2017; Barry et al., 2012.) Therefore, effective self-management support requires healthcare professionals to possess the skills necessary to educate, support, and communicate with patients throughout the entire support process.



The 5A's model is a recommended approach for supporting self-management, comprising five essential phases: Assess, Advise, Agree, Assist, and Arrange (Fiore et al., 2008). In the Assess phase, healthcare professionals need to evaluate patients' motivation, beliefs, and their perception of their current situation in managing their chronic condition to personalize the support provided. During the Advice phase, healthcare professionals should offer evidence-based, detailed information about the relevant chronic condition, including its symptoms and treatment options. Health education plays a crucial role in empowering patients to make informed decisions and take care of themselves. In the Agree phase, healthcare professionals and patients collaboratively determine goals to pursue, taking into account the patient's preferences and previous positive experiences. The Assist phase involves healthcare professionals utilizing their competences to support patients in making health behavior changes within their daily routines. This may also involve seeking assistance from other healthcare professionals when appropriate. In the Arrange phase, follow-up care is organized to ensure continuity of support. Supporting self-management requires a multidisciplinary approach that emphasizes effective communication and care coordination. Accountability plans should be developed to monitor progress towards goals. (Nevelsteen, 2021, pp. 168–172.)

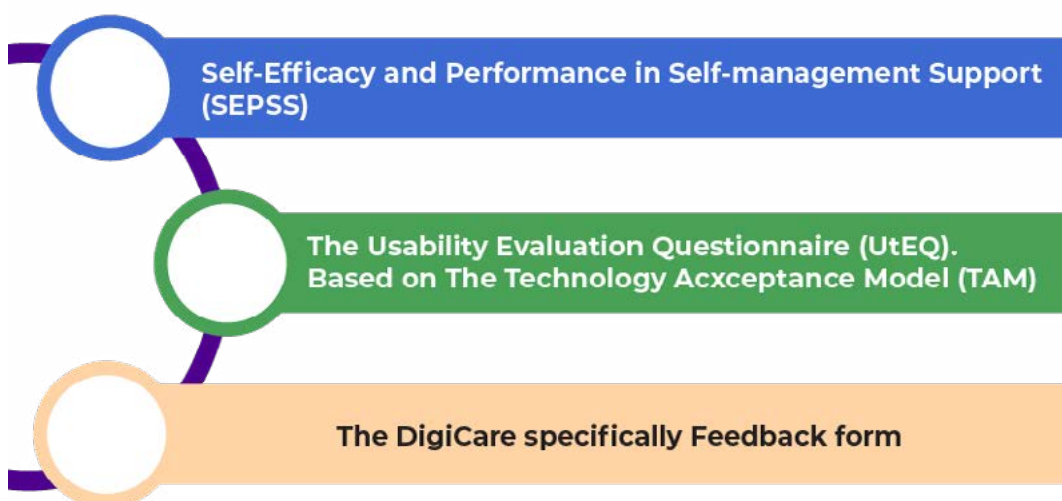


Another widely used coaching model is the GROW Model, which comprises four phases: Goal, Reality, Options, and Will (Whitmore, 1996). In this model, the healthcare professional takes on the role of the coach, while the patient becomes the coachee. In the Goal phase, the patient is encouraged to identify their desired goals in relation to their situation, encompassing both short-term and long-term objectives. Once the goal is established, the healthcare professional proceeds to the Reality phase, where the patient assesses their current health situation. This phase aims to foster awareness of the present reality and identify any potential barriers to change. Subsequently, in the Options phase, the patient is guided to explore different possibilities and actions that can

be taken to achieve their goals. Through questioning and discussion, the healthcare professional assists the patient in considering available options. Additionally, the patient is supported in identifying the necessary actions to be taken. The final step in the coaching process using the GROW model is the Will phase, where an action plan is tailored. The patient is encouraged to take responsibility and commit to the actions identified. Throughout each phase, the healthcare professional plays a supportive role, empowering the patient to take ownership and responsibility of their situation. (Nevelsteen, 2021, pp. 161 –167.)

### Assessment of Student’s Competences

The DigiCare Model equips healthcare students with the necessary knowledge and skills to effectively support and coach patients in self-managing their chronic conditions, utilizing health and wellbeing technology. To evaluate students’ proficiency in the DigiCare educational intervention, teachers are provided with three assessment tools (Figure 21).



**Figure 21.** The evaluation tools used in the DigiCare project.

The SEPSS and TAM have been accepted as valid and reliable instruments after being cross-sectionally adapted and psychometrically validated among healthcare students in the project's partner institutions in Bangladesh and Vietnam. This chapter presents both instruments in more detail. Additionally, a feedback form tailored to the DigiCare project was designed to gather participants' feedback and insights on their experiences and perceptions of using the GROW model, as well as their views on coaching, digital tools, and digital coaching.

### **The Self-Efficacy and Performance in Self-management Support (SEPSS) Instrument**

Supporting patient self-care necessitates healthcare professionals to adopt a new role and acquire additional skills. The Self-Efficacy and Performance in Self-management Support (SEPSS) scale provides a reliable and valid tool for evaluating current practices, educational needs, and the effectiveness of self-management support training, particularly based on the 5A's model. Evaluating the self-efficacy of healthcare providers is crucial in the context of self-management support, as it strongly correlates with behaviour prediction. (Duprez et al., 2016.) Within the framework of the DigiCare Project, the SEPSS has been employed to assess the self-efficacy and self-management support performance of nursing and medical students.



**Evaluating the self-efficacy of healthcare providers is crucial in the context of self-management support.**

## The Use of SEPSS

The SEPSS instrument is a 36-item questionnaire that employs a 5-point Likert scale to measure self-efficacy and performance in relation to self-management support, based on the 5A's model. The instrument consists of six subscales, each comprising six items. Each item is assessed using two questions. The first question gauges the participant's confidence in their ability to perform the task (self-efficacy). Participants are asked to rate their agreement with the statement "I think I can do this" on a scale from 0 to 4, ['Not at all' (0), 'Not sufficient' (1), 'More or less' (2), 'Sufficient' (3), 'Good' (4)]. The second question assesses the frequency with which the participant engages in the task (performance). Participants indicate their response to the statement "I do this" using a scale from 0 to 4, ['Never' (0), 'Rarely' (1), 'Occasionally' (2), 'Frequently' (3)- 'Always' (4)]. (Duprez et al., 2016.)

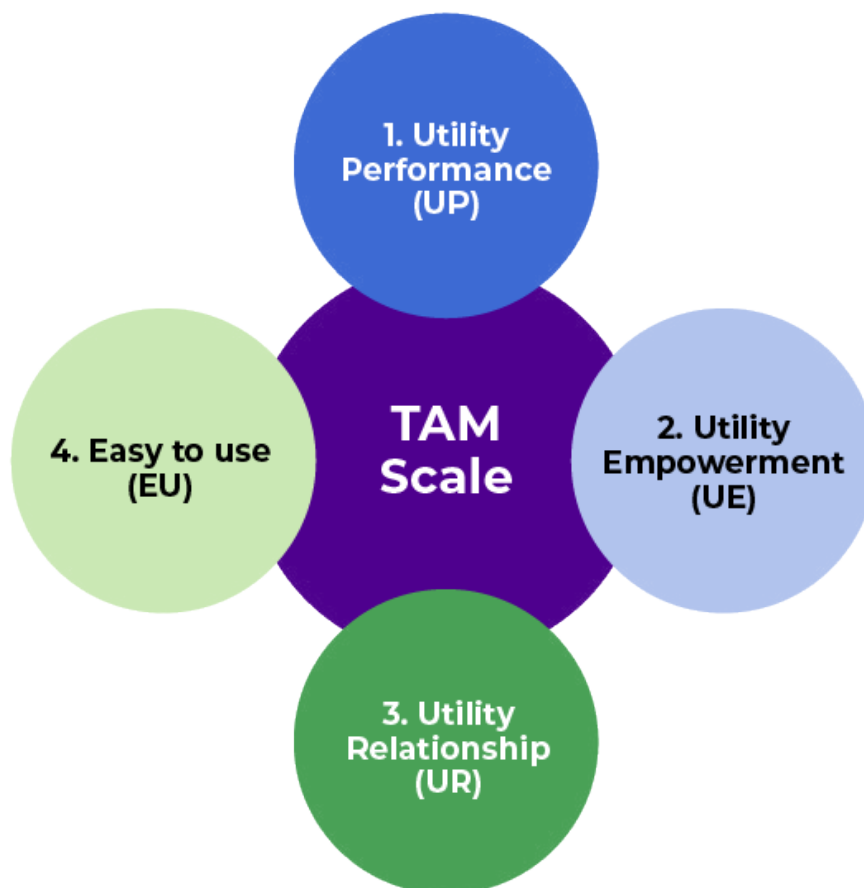
The total score is calculated by summing the mean scores for self-efficacy and performance, both of which range from 0 to 24. High scores on the SEPSS instrument reflect high levels of self-efficacy and a greater performance in supporting self-management. The self-reported scores obtained through the SEPSS serve as outcome measures for self-management support practices in clinical and research settings, aid in identifying educational needs, and facilitate the assessment of personal growth. (Duprez et al., 2016.)

The SEPSS instrument was used as part of the DigiCare project (Read More in Chapter 5.2).

## The Technology Acceptance Model Scale (TAM)

The Technology Acceptance Model (TAM) scale is designed to assess the utilization of digital technologies and tools. The model is based on the theory of reasoned action, which posits that intention precedes action, and has been proven to be an effective predictive model (King & He, 2006, Rafique et al., 2018).

The questionnaire utilized in this study was developed using the TAM model, which initially consists of 45 items categorized into four factors (Figure 22).



**Figure 22.** The sections of the TAM Scale (King & He, 2006, modified)

The User-Relationship (UR) factor of the scale assesses students' perceptions of how technology aligns with their workflow, integrates into existing clinical processes, and improves communication and collaboration with patients and healthcare professionals. This factor consists of 10 items that specifically evaluate the impact of technology on fostering a positive and effective relationship between healthcare professionals and patients. These items collectively measure the extent to which technology is perceived to support meaningful interactions, empathy, and rapport within the context of patient care. (Parreira et al., 2020.)

The Utility-Performance (UP) factor of the scale assesses the perceived performance-enhancing aspects of technology in healthcare settings. This factor comprises nine items that collectively measure students' perceptions of how technology contributes to their efficiency, effectiveness, and control in performing various tasks related to patient care. By evaluating the utility of technology in terms of performance, this factor provides insights into the extent to which technology enables students to streamline their workflow, manage tasks efficiently, and have greater control over their work processes. (Parreira et al., 2020.)

The User Empowerment (UE) factor of the scale consists of six items that assess the role of technology in empowering patients to take an active role in managing their own health. These items capture the perceived utility of technology in promoting patient empowerment and engagement in their healthcare journey. This factor highlights the potential of technology to support patients in developing self-management skills, fostering motivation, and encouraging a proactive approach towards their own health. (Parreira et al., 2020.)

The Ease of Use (EU) factor of the scale focuses on the perceived ease of use and user-friendliness of technology in the clinical care of patients. It evaluates students' perceptions of the ease of learning and navigating the technology, as well as the intuitiveness of its interface and features. (Parreira et al., 2020.) The eight items of the factor assess various aspects, such as the requirement of a short learning period, the need for prior knowledge, and the demand for minimal mental effort.


Respondents rate each item on a Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree), with higher scores indicating a greater inclination to incorporate technology into their clinical practice due to its perceived benefits (Parreira et al., 2021). The data collection instrument also includes a brief section that gathers information on participants' sociodemographic characteristics (e.g., age, gender) and academic details (e.g., course year, enrolment status).




Ideally, the TAM questionnaire should be administered both before and after implementing an educational program. The TAM questionnaire provides valuable insights into students' comfort levels with using relevant technology. It aims to assess various dimensions related to the utilization of digital technologies and tools within a specific environment.

In the DigiCare project, we applied the TAM questionnaire to assess healthcare students' perceptions of using digital technology and tools in the context of coaching patients with chronic diseases (Read more in Chapters 5.3 and 5.4).

## Feedback Form



The DigiCare feedback form was specifically developed and utilized to gather valuable insights regarding students' experiences with the implementation of self-management support and coaching tools in the DigiCare project. This form was designed to cater to the feedback collection needs within the context of the DigiCare project. The main purpose of gathering feedback is to bridge any existing gaps between the current understanding or performance and the desired goal (Sadler, 1989). In the context of the DigiCare Project, we gathered user feedback to obtain objective information about the user experience. This valuable feedback allowed us to make necessary refinements and improvements to our overarching objective—the DigiCare Model, including its Learning Packages, and ultimately the Educational Program as a whole.



A feedback questionnaire was distributed to participants after each pilot cycle (Read more in Chapter 4.1) with the aim of gathering feedback to improve the DigiCare Model (Read more in Chapter 3) and its Learning Packages (Read more in Chapter 4.1). The pilots provided an opportunity to collect valuable insights from healthcare teachers and students. Initially, the feedback form was sent out in English and Vietnamese. However, due to low response rates during the initial phase,

we decided to include questions in Bangla as well. This approach allowed us to cater to the language preferences of participants, ensuring inclusivity. Consequently, the feedback form consisted of instructions and questions presented in three languages: English, Vietnamese, and Bangla. Respondents had the option to utilize any of these languages in their responses. Prior to completing the form, participants were provided with a clear explanation of the purpose of the feedback and how it would be utilized. The instructions also emphasized that the responses would remain anonymous and would not identify the respondents. Responding to the feedback form was considered as providing informed consent to participate in the evaluation process.

The questionnaire comprised a total of 24 questions. The first seven questions focused on gathering sociodemographic information, such as age and organizational affiliation, as well as academic details, including the area of study. The remaining questions consisted of a combination of 5-point Likert scale items and open-ended questions. Participants were asked to indicate their level of agreement with the provided statements regarding the use of the GROW model during coaching, both as a coach and as a coachee, using a rating scale ranging from 1 to 5, ['Not at all or very badly' (1), 'Few times or little' (2), 'Average or neutral' (3), 'Mostly or well' (4), and 'Many times' (5)]. The open-ended questions sought to inquire about respondents' experiences in both the role of a coach and a coachee, their experiences with in-person and online coaching, and their interactions with the coach, focusing on their experiences related to professional communication. Additionally, participants were asked about their preparation for the coaching training and their perceptions of the education provided. These Likert scale statements, and open-ended questions were purposefully crafted to capture participants' experiences during the coaching session and gather valuable insights into their perspectives (Read more in Chapter 5.6).

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