



Soft skills development among vocational students in courses related to medical and comprehensive healthcare industry

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Abstract

Vocational education aims to prepare students to enter the workforce. This study aims to develop guidelines for the development of soft skills among vocational students in courses related to the medical and comprehensive healthcare industry by qualitative research methods. Data were collected by interviewing eighteen key informants from six companies consisting of six executives, six human resources officers, and six workers to examine the essential soft skills of vocational graduates in courses related to the medical and comprehensive healthcare industry matched with professional standards and industry requirements, and interviewing thirty-one key informants from four vocational institutes consisting of three administrators, eight teachers, and twenty students to study the current state of students' soft skills development. The results of both were synthesized as the soft skills development guideline among vocational students in courses related to medical and comprehensive healthcare industry. Findings showed that key essential soft skills among vocational students in courses related to medical and comprehensive healthcare industry are social skills (communication and teamwork), thinking skills (creativity, analytical thinking, and problem-solving), and emotional skills (stress management, anger management, and self-control), which are the foundation of other soft skills. Vocational institutes should encourage the value of soft skills for teachers and students through official meetings, activities, and events, incorporating soft skills into classroom activity through participatory learning, organizing relationship-building activities between students, developing professional teachers with proficiency in teaching soft skills, and assessing students' soft skills by assessing their portfolio and designating soft skills as part of the student's learning achievement.

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Introduction

Today's challenging economic situation has an impact on countries all over the world. Because of these developments, nations attempt to adapt to successfully compete in the global market. Thailand 4.0 policy purposes to transform developing countries into developed countries. According to Thailand 4.0 policy, the Thai government considers medical and comprehensive healthcare industry to be a priority sector for investment and further development (Thailand Investment Review, 2017). A challenging economic situation means that medical and comprehensive healthcare industry requires human resources with knowledge and skills that are in line with changes in the industry.

Educational institutions have a responsibility to provide teaching and learning opportunities that enable individuals to be workforce, so educational institutions must modify their curricula and teaching resources to produce graduates with the necessary skills and knowledge to enter the medical and comprehensive healthcare workforce. One of the educational institutions that plays a key role in developing middle-level labor in the industrial sector via practical application is vocational education (OECD/UNESCO, 2016). Medical business courses for vocational graduates prepare them for employment in healthcare facilities such as hospitals, community hospitals, nursing homes, etc. Knowledge of academic subjects, also known as hard skills, is essential for job performance in the medical and comprehensive healthcare industry, but we should not undervalue the importance of soft skills in healthcare settings. Soft skills are critical to communicate well with team members and help increase patient satisfaction (Laari & Dube, 2017; Peddle et al., 2019; Morrell et al., 2020).

Vocational education must ensure the transfer of training and prepare students to gain adequate skills to meet the demands of their future careers because their profession involves the front office then interactions with patients and clients. Many studies show evidence that soft skills in baccalaureate medical students are of paramount necessity for workers in these medical service domains. After all, focusing merely on technical skills is not enough, since labor today demands skills that range far beyond the knowledge and hard skills within their specialization (Laari & Dube, 2017; Peddle et al., 2019; Morrell et al., 2020). There are international frameworks that have developed key skills that workers should have such as the top 10 work skills of 2025 (World Economic Forum,

2020) while the Thai National Scheme of Education B.E. 2560–2579 (2017–2036) addresses 3Rs and 8Cs, 3Rs are Hard Skills and 8Cs are Soft Skills consisting of critical thinking and problem solving, creativity and innovation, cross-cultural understanding, collaboration, teamwork and leadership, communication, information and media literacy, computing and IT literacy, career and learning skills, and compassion (Office of the Education Council, 2017). Previous research in Thailand looked at critical soft skills in other vocational courses, mechatronics, and robotics, which is one of the target industries according to the Thailand 4.0 policy that focuses on working with technology; however, soft skills are important for their future work (Thianthai & Sutamchai, 2022). There is little understanding of the extent to which soft skills are necessary for vocational students in courses related to the medical and comprehensive healthcare industry.

Therefore, this study focused on soft skills that vocational students in courses related to medical and comprehensive healthcare industry should possess by interviewing key informants from the companies and interviewing key informants from vocational institutes to study the current state of students' soft skills development. The combined findings from both serve as a framework for developing soft skills for vocational students in courses related to the medical and comprehensive healthcare industry.

Literature Review

Dimension of Soft Skills

According to Robles (2012), soft skills are essential for effective performance in a modern workplace and can be defined as “interpersonal qualities, also known as people skills and personal attributes that one possesses”. Soft skills, in general, are intrapersonal and interpersonal abilities that characterize the way people interact with others, work, and a variety of other activities. Many researchers have identified several soft skills expected of a prospective graduate. Elmohmady et al. (2020) identified the clusters of nurses' soft skills as decision-making skills, communication competence skills, team dynamic skills, and leadership behavior skills. Patients define quality care as open communication and information flow and, also, appreciate nurses who can listen and explain complex technical knowledge. Patients appreciate when healthcare workers show them civility, emotional support, sensitivity, kindness, compassion, and sympathy.

Peddle et al. (2019) supported that communication is the most essential soft skill because communication failure is one of the most common causes of unintentional patient injury. In addition, decision-making abilities result in appropriate interventions following patient evaluation, according to Large and Aldridge (2018). As well, soft skills are the very foundation of nursing care because they involve a sensitive spirit and creative imagination (Sills, 2015). Many researchers have identified the benefits of soft skills in health sciences students. Elmohmady et al. (2020) found that soft skills are cognitive social abilities that complement a nurse's technical skills. The study by Laari and Dube (2017) found that soft skills enhance the compassion abilities and performance of nurses. Moreover, soft skills are more important than hard skills as perceived by patients (Ng, 2020). This study divided soft skills into three sets of skills based on a literary review as follows; Firstly, social skills are linked to the ability to engage with people. Such is a group of talents vital for daily living and collaboration consisting of the following essential abilities: communication and teamwork. Secondly, thinking skills are referred to as the cognitive processes utilized to attain a goal and encompass the following basic abilities: creativity, analytical thinking, and problem-solving. Finally, emotional skills encompass the crucial abilities of stress management, anger management, and self-control. They require regulating emotional control and awareness of things.

Soft Skills Development

The research study by Pires et al. (2018) was designed to develop a tool to measure nontechnical skills. Findings suggested that soft skills should be incorporated into graduate curricula for all health professionals in order to determine requirements and enhance performance in the healthcare working environment. Research findings conducted by Washor (2015) suggested that participating in an internship contributes to students' soft skills development. Many studies have shown that experiential learning theory and social cognitive learning theory are used to teach students soft skills in various fields. Group projects help students learn and communicate and teamwork helps in understanding one's role (Nugraha et al., 2016; van Griethuijsen et al., 2019). Providing students with the opportunity to participate in simulated situations could aid in their ability to think critically and make sound decisions (Levant et al., 2016). The acquisition of thinking skills, such as critical thinking, creative thinking, and problem-solving skills, is

facilitated through the use of activities that incorporate the lesson's content (Yang, 2015). Students are encouraged to initiate their own learning independently. They should be encouraged to develop self-awareness and engage in self-study to increase their motivation to learn (Stapa et al., 2015). In addition to the classroom, soft skills can be an activity that allows students to discover ways to express themselves in the context of learning new skills and socializing with others (Sudana et al., 2019).

Previous studies have given best practices for soft skills development in healthcare education. Soft skills can be taught using a variety of techniques, such as case studies, lectures, seminars, and problem-based learning. The main idea is to explain specific soft skills before using them in practice (Gonzalez et al., 2013). Ghasemi et al. (2018) recommended workshops that might assist nursing students be emotionally and spiritually prepared to carry out their employment responsibilities. Additionally, industrial training in hospitals is responsible for improving nursing students' emotional intelligence, such as self-awareness, through organized training (Raeissi et al., 2021). Based on the literature reviews, the composition can be synthesized to understand the current state of soft skills development among vocational students in courses related to medical and comprehensive healthcare industry with 4 elements: (1) soft skills development in the curriculum of vocational education institutions; (2) soft skills development in the learning process both in the classroom and extracurricular activities; (3) understanding about soft skills of the teacher; and (4) cooperation between vocational education institutions and companies in industrial training.

Methodology

The qualitative research method was used to investigate the development of soft skills among vocational students enrolled in courses related to medical and comprehensive healthcare industry. Reviewing the literature to develop the interview guideline. A semi-structured interview was conducted to collect data by voice recording and field note-taking.

Participants

Participants I: Companies

Six companies that have accepted students for internships and their willingness to participate in this research were selected. Three key informants from each company may be the director or supervisor,

human resources officer, and worker. Total key informants from six companies consisted of six executives, six human resources officers, and six workers.

Participants II: Vocational education institutions

Four vocational education institutions were selected as the settings for the study. The criteria for selecting these schools were based on their offered medical business courses at the certificate level and the diploma level at least since the academic year 2018, and their willingness to participate in this research.

Key informants were vocational institution administrators and teachers who teach medical business courses and students who have been studying medical business courses at the certificate level and the diploma level for at least one academic year and engaged with school activities. Total key informants from four vocational institutes consisted of three administrators, eight teachers, and twenty students.

Data Collection

The semi-structured interview was conducted with key informants from companies to study essential soft skills of vocational graduates in courses related to medical and comprehensive healthcare industry according to professional standards and the essentials of medical and comprehensive healthcare industry.

The significance of soft skills and how their components matched the demands of companies in the medical and comprehensive healthcare industry were the main topics of discussion during the semi-structured interview with key informants from the companies. The current state of students' soft skill development, their knowledge and experience with the development of soft skills in vocational education institutions, and their attitudes about how soft skills could be better facilitated were the main topics of the semi-structured interview with key informants from vocational education institutions.

Data Analysis

All recordings were transcribed and subjected to content analysis, which revealed common narratives pertinent to the development of soft skills and sub-situations requiring priority improvement in relation to the study's objectives. The combined findings from companies and vocational education institutions were synthesized to serve as a framework for developing soft skills in vocational students in courses related to medical and comprehensive healthcare industry.

Triangulation Data

The researcher also employed the triangulation method, which included semi-structured interviews, voice recordings, field notes, and other evidence, such as information on the website or media of the vocational education institutions and asking key informants to verify data accuracy. Cross-verification was conducted on the data received from different sources to confirm that the data matched.

Results

Essential Soft Skills of Vocational Graduates in Courses Related to Medical and Comprehensive Healthcare Industry

Social skills

The functional nature of the profession in the comprehensive medical industry is a healthcare team collaboration and providing services to patients and relatives. The key social skills are communication and teamwork, which will facilitate smooth healthcare team collaboration and good communication with clients, which will result in positive results for the organization's operations. For example, key informants illustrated:

"...Frequently uses communication to be an intermediary between the doctor and the patient..."

(SL1: key informant of company 2, personal communication, August 29, 2022).

"...It is quite important for work in a medical business setting, it is quite necessary to work as a team and communicate with each other in the organization..."

(TY3: key informant of company 4, personal communication, November 11, 2022).

Thinking skills

The nature of work in a medical business setting encounters patients with a variety of needs, consequently, an ability to think in various situations including creativity, analytical thinking, and problem-solving is important. For example, key informants illustrated:

"...When they take the temperature of a patient and they can recognize body temperature abnormal, then they can solve the problem by informing the supervisor..."

(SM3: key informant of company 1, personal communication, July 27, 2022)

“...In terms of thinking skills, creativity, analytics, and problem-solving, these must be in the person who performs the task. Creativity allows us to look at challenging situations from a new perspective. Solutions using wisdom are corrected in the right way...”

(PH1: key informant of company 5, personal communication, November 25, 2022)

“...Creativity benefits work related to the medical business, such as thinking about how to measure the body temperature so that a thermometer does not fall...”

(DM1: key informant of company 6, personal communication, November 18, 2022)

Emotional skills

Emotional skills refer to the ability to manage personal emotions and to be conscious of things including stress management, anger management, and self-control. Emotional skills are fundamental to good expressive behavior for both colleagues and clients, which support social skills and thinking skills. For example, key informants illustrated:

“...We have to manage our emotions to be able to work well with the team, including when we have to face stress with the patient...”

(SM2: key informant of company 1, personal communication, July 29, 2022)

“...Emotions are the basis of every action...”

(JN2: key informant of company 3, personal communication, November 18, 2022)

“...Emotional skills in stress management, anger management, and self-care are very important, especially in hospitality...”

(PH1: key informant of company 5, personal communication, November 25, 2022)

The Current State of Students' Soft Skills Development

Soft skills development in the curriculum of vocational education institutions

Vocational education institutes have taken the needs of business companies as part of the development of educational institutes' operations. All the vocational education institutions' key informants try to implement soft skills as part of their curriculum, such as initiating teachers to plan for teaching soft skills, especially one of them (Vocational institution 3), where concrete actions are taken. For example, key informants illustrated:

“...Assign the teacher to write a plan; it looks like a starting point...”

(TM2 Teacher: key informant of vocational institution 1, personal communication, September 20, 2022).

“...We asked what kind of graduates employers need, so we have to adapt that to the curriculum...”

(AD2 vocational institution administrator: key informant of vocational institution 2, personal communication, November 2, 2022).

“...Monday, Tuesday, and Wednesday let students learn hard skills and learn about professional skills, and then on Thursday and Friday, we impart soft skills...”

(AD3 vocational institution administrator: key informant of vocational institution 3, personal communication, December 8, 2022).

“...We are trying to impart soft skills to our students...”

(TW1 Teacher: key informant of vocational institution 4, personal communication, December 22, 2022).

Soft skills development in the learning process both in the classroom and in extracurricular activities

The development of soft skills in the learning process in the classroom that came to mind for most students was group work, simulation, and game-based learning. In most cases, outside the classroom, students acquire soft skills through community service and workplace internships. For example, key informants illustrated:

“...Organizes group work for students to work as a team, such as doing a project, doing research, and making reports, which require communication between members of a group and many kinds of soft skills...” “...In the first year, when I was studying theory, I didn't understand much, but when I practiced in an internship, it was easier to understand...”

(RD1 Student: key informant of vocational institution 1, personal communication, October 20, 2022).

“...From group work, I gained soft skills and participated...”

(HC1 Student: key informant of vocational institution 2, personal communication, October 26, 2022).

“...We innovate for patients in the community; some people may not even know us, but they cooperate....”

(SC1 Student: key informant of vocational institution 3, personal communication, November 9, 2022)

“...Several professional theories and practices are applied to the Kahoot game...”

(TS1 Teacher: key informant of vocational institution 3, personal communication, November 9, 2022)

In some key informant vocational institutes, portfolios have begun to be used to track student learning outcomes, but no definitive action has been taken. For example, key informants illustrated:

“...Vocational education institutions support making portfolios...”

(HC1 Student: key informant of vocational institution 2, personal communication, October 26, 2022).

“...The portfolio is not that comprehensive now, but we can look at the work that children do...”

(TY2 Teacher: key informant of vocational institution 4, personal communication, December 22, 2022).

The student affairs department provides various types of resources to support students' extra-curricular activities and student organizations. For example, key informants illustrated:

“...There are activities for the students to do with their peers in other courses; they will know how to adapt, and listen to others' opinions as well, and the main thing is to work with others. This is the role of the student affairs department...”

(TM2 Teacher: key informant of vocational institution 1, personal communication, September 20, 2022).

“...The student affairs department has emphasized this aspect, such as good manners or discipline...”

(HD3 Student: key informant of vocational institution 2, personal communication, October 26, 2022).

Relating of teachers in developing students' soft skills

Teachers are the main factor affecting teaching related to learners because teachers are the closest people in a vocational institution, so if vocational education institutions need to cultivate soft skills, it should come from the initiative of teachers. Moreover, one of the key informants' vocational education institutions (vocational Institution 2) has a strong focus on developing teachers to be proficient through research. For example, key informants illustrated:

“...Teachers cultivate discipline, morals, and ethics in us...”

(RC5 Student: key informant of vocational institution 1, personal communication, October 20, 2022)

“...Teachers have to do research every year...”

(AD2 vocational institution administrator: key informant of vocational institution 2, personal communication, November 2, 2022)

“...Teachers are the closest people in college. If we are going to cultivate soft skills, teachers should take the initiative...”

(HC1 Student: key informant of vocational institution 2, personal communication, October 26, 2022)

Cooperation between vocational education institutions and companies in industrial training

The school invites external speakers who are experts to share their experiences to transfer new knowledge to students. Vocational education institutions and companies evaluate professional experience training according to a jointly organized training plan. On-site practice allows learners to acquire new knowledge, experience and enhance the skills needed to work in real-world situations. For example, key informants illustrated:

“...Cooperate with companies to make a training plan together that is effective...”

(AD1 vocational institution administrator: key informant of vocational institution 1, personal communication, December 16, 2022).

“...When I went to the internship, I was able to do it in real life, I understood the class lessons better, and developed skills to live with others...”

(HC1 Student: key informant of vocational institution 2, personal communication, October 26, 2022).

“...Invite doctors to give new knowledge which isn’t in textbooks, such as geo-social mapping, and then students would have to walk down to the village to find bedridden patients...”

(AD3 vocational institution administrator:
key informant of vocational institution 3,
personal communication, December 8, 2022).

“...Sometimes, invite experts to teach practical...”

(TY2 Teacher: key informant of
vocational institution 4,
personal communication, December 22, 2022).

Guideline for Soft Skills Development

Both from the review of the literature and the findings, these guidelines are focused on

1. Management within institutions that emphasize the development of soft skills. The vocational education institutions’ soft skills policy development by the school administrator plays an important role. The school administrators and teachers require a meeting to plan and provide joint guidance on the soft skills that should be taught to students. The school administrators designate the student affairs department to be an entity responsible for soft skills at the school level while the student affairs department is primarily responsible for organizing course-supplementing activities. Supporting teachers by providing academic advice and assistance to teachers. Providing an information technology structure that is compatible with students’ learning. Communicating the importance of soft skills to create students’ awareness in the first-year school.

2. Organizing educational programs to promote the acquisition of soft skills. Through participatory learning, define activities or projects by incorporating soft skills into each activity in the classroom. Encouraging students to participate in group projects and volunteer work helps them develop their social skills. Fostering thinking skills through the assignment of classwork or simulation training. Teachers can act as mentors for emotional resilience, helping students learn how to manage negative impulses, regulate their emotions, and form strong bonds with peers and teachers in order to help them develop emotional abilities which are the foundation of other soft skills to prepare them for real-world situations. Industrial training in the company enables students to gain additional work experience and soft skills, such as communication with patients and clients, healthcare team coordination, etc.

3. Creating supplemental courses or activities that supplement the development of soft skills. The student affairs department organizes activities that promote the learning process, and cultivate, and grasp soft skills. Schools set regulations and rules of an inclusive society within the school, as well as organize spaces for students to demonstrate knowledge, understanding, and creativity. Encourage the groups of students by their academic interests.

4. Developing professional teachers with expertise in teaching soft skills. Supporting a consulting system that enables them to increase their teaching abilities by inviting experts from the company in medical settings such as trainers. Such also supports educational channels to increase knowledge for teachers, such as training, conducting research in the classroom, etc., because the findings indicate that teachers are the most important factors influencing learner-related teaching.

Guideline for soft skills development among vocational students in courses related to medical and comprehensive healthcare industry

1. Management within institutions that emphasize the development of soft skills.
2. Organizing educational programs to promote the acquisition of soft skills.
3. Creating supplemental courses or activities that supplement the development of soft skills.
4. Developing professional teachers with expertise in teaching soft skills.
5. Assessing students’ soft skills to encourage students

Essential soft skills of vocational students in courses related to medical and comprehensive healthcare industry

1. Social skills (communication and teamwork)
2. Thinking skills (creativity, analytical thinking, and problem-solving)
3. Emotional skills (stress management, anger management, and self-control)

Figure 1 Soft skills development among vocational students in courses related to medical and comprehensive healthcare industry

5. Assessing students' soft skills to encourage students to develop self-motivation, positive attitudes, and initiative to develop their soft skills, as well as to enable students to recognize themselves and verify the results of developing their soft skills through the creation of a portfolio or e-portfolio. Teachers provide feedback on what each student needs to develop further. According to the results of the study, portfolios have begun to be used to track student learning outcomes, but no definitive action has been taken.

Discussion

The findings according to previous research found that communication, teamwork, and problem-solving are important soft skills from the perspective of patients in a healthcare facility (Hartiti et al., 2020). Key soft skills, which include personal skills, social skills, and self-regulation are essential to make the recipient feel confident in receiving treatment (Ernawati & Bratajaya, 2021).

Teachers are the main factors affecting teaching related to learners. These findings are consistent with those of Allala and Abusukkar (2018), who assert the significance of soft skills and the need to develop them for success in professional life, and that teachers should devote more attention to soft skills, particularly during their initial training and throughout their careers. Moreover, teachers must act as positive role models for their students; therefore, one of the most important tasks is to recruit prospective teachers. Teachers' morale should be bolstered through the use of appropriate performance indicators and reward systems (Che-Ani et al., 2014). Soft skills are personal characteristics that improve the interactions, job performance, and career prospects of a lecturer (Pachauri & Yadav, 2014).

As a result, vocational education must develop a curriculum and promote learning that fulfills the soft skills demands of each unique occupation for learning to be transferable. According to Deming (2017), changes in the labor market have affected vocational courses to integrate soft skills as part of course management, and Asonitou and Hassall (2019) suggested that further skills should be developed, especially developing students' thinking skills through the development of employment-supporting courses. This study found that soft skills are effectively developed through approaches to curriculum and teaching. Many studies in vocational education have also shown that curriculum relevance,

training that simulates real-world work settings, and specific planning are important factors influencing the transfer of vocational education to the workplace (Hiim, 2017; Hinrichs, 2014; Sobri et al., 2019). According to Kim and Yi (2015), the soft skills of healthcare students, such as self-awareness, should be discovered early in their education and integrated into the entire curriculum. For this reason, efforts to improve nursing care students' soft skills as specified in the curriculum are considered essential (Ng, 2020).

Conclusion and Recommendation

Conclusion

Based on the study's findings, it can be stated that: Today, companies are looking for individuals who not only have the requisite capabilities for the job but also display what they perceive to be critical soft skills for success in a healthcare team. Furthermore, a lack of soft skills such as communication and collaboration might lead to misunderstandings between medical personnel and patients, which might lead to harmful prescription errors and complaints. Healthcare providers confront numerous challenges and stressors in their jobs. Emotional skills can help people deal with these issues by increasing their self-awareness, self-regulation, empathy, communication skills, and ability to act. Vocational education institutions recognize the importance of soft skills that can help support students in courses related to medical and comprehensive healthcare industry to succeed in their studies and support their careers. In this study, several elements are suggested as a guideline, namely, promoting the importance of soft skills, integrating soft skills into an academic curriculum by collaboration between vocational institutes and companies, creating supplementary course activities and learning opportunities for students, practicing the development of vocational teachers in teaching soft skills and assessing students' soft skills by portfolio or e-portfolio.

Recommendation

Recommendations for implementation suggest soft skills development among vocational students in courses related to medical and comprehensive healthcare industry should focus on social skills (communication and teamwork), thinking skills (creativity, analytical thinking, and problem-solving), and emotional skills (stress management, anger management, and self-control).

These recommendations should be put into practice by vocational education institutions using specific policies. Through industrial training, students should be able to apply the knowledge and abilities they have learned in the classroom to actual situations, including working in a front desk environment where they would frequently have contact with patients.

Recommendations for further study; soft skills are personal attributes that are consequences from education and experience accumulation. In addition to educational institutions, students are shaped by a variety of social institutions including family, religion, etc. Further studies should be conducted on the effect of diverse social institutions on young learners' development of soft skills to gain knowledge of soft skills development among youth.

Conflict of Interest

The authors declare that there is no conflict of interest.

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