

Models of education in medical professions using the example of pre-graduate education systems for nurses in Poland and Turkey

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Abstract

Nursing education is conducted in accordance with the educational standards applicable in each country. It is based on the active learning model, which is recognised as a contemporary trend in education. This model employs innovative technologies and emphasises active learning methods. Poland, as a member of the European Union, adheres to a unified higher education system and the principles of the Bologna Process. In contrast, Turkey is not a member of the European Union; therefore, its higher education system for nursing students operates under different principles. Nevertheless, the components of education in Turkey are similar to those in Europe, owing to its geographical proximity and aspirations to join the EU. The aim of this article is to compare the nursing education systems in Poland and Turkey and to analyse modern trends in nursing education, drawing on experiences from participation in the Erasmus+ exchange program.

Introduction

Nursing is a profession grounded in public trust, dedicated to delivering professional and holistic care to patients across all age groups and health conditions. Consequently, the educational process continually evolves to broaden the opportunities within this field and to facilitate the ongoing enhancement of medical knowledge. Over the past few decades, nursing education has experienced significant transformations aimed at improving educational quality and fostering the development of new competencies and practical skills.

Today, nursing education uses an active learning model for students and integrates new technologies, such as medical simulations, to cultivate specialised practical skills. The approach to nursing education also varies based on the educational system of each country. In the European Union, nursing education has been standardised, resulting in similarities at the higher-education level across EU member states. In contrast, the situation in Turkey, which is not a member of the European Union, differs significantly.

The purpose of this article is to compare the nursing education systems in Poland and Turkey, and to analyse contemporary trends in nursing education based on experiences gained through participation in the Erasmus+ exchange program.

For the purpose of this analysis, a literature review was conducted, focusing on publications related to nursing education.

Student-centred learning in nursing education

Higher education empowers students to acquire new knowledge, develop professional skills, and cultivate their interests in specific fields of study. The educational process is multifaceted, emphasising both teaching and the transfer of knowledge. The evolution of nursing education began with Florence Nightingale, who established the world's first nursing school. Guided by principles of empathy and patient care, she underscored the significance of meticulous care planning. Nightingale placed a strong emphasis on hygiene and patient observation, laying the foundational principles upon which modern nursing training and care are built. Inspired by her legacy, numerous nursing education institutions have been established worldwide [1].

For many years, nursing education was primarily vocational and did not provide opportunities for greater professional autonomy. However, advancements in science and technology have significantly contributed to the evolution of nursing education, elevating it to the university level. This transformation has resulted in the establishment of educational programs for nurses that are grounded in contemporary medical and scientific knowledge. The field has developed dynamically, and societal perceptions of the profession have evolved accordingly. There is now a heightened awareness of the unique characteristics of the nursing profession, accompanied by

a growing desire for continuous professional development and deeper knowledge [2].

For many years, traditional teaching methods predominated, characterised by teachers (mentors) delivering extensive content during classes while students passively absorbed the information. The instructor controlled the didactic process, offering a singular approach to thinking and learning. However, educational practices have evolved to meet contemporary needs, integrating new technologies, including digital tools, as learning aids. Traditional higher-education methods are gradually being replaced by student-centred learning (SCL) [3].

This shift has been influenced by the international standardisation of education resulting from the Bologna Process, as well as the growing importance of psychology and pedagogy in learning processes. The implementation of student-centred learning (SCL) was initiated during the Leuven and Louvain-la-Neuve conference in 2009, where the need for educational reform was acknowledged. Following this decision, several European projects were launched to support SCL, including Time for Student-Centred Learning (T4SCL) and Peer Assessment of Student-Centred Learning (PASCL). These projects aimed to assist universities in implementing the new teaching model and evaluating its effectiveness for continuous improvement. In 2014, a document outlining educational standards and guidelines in Europe was approved, mandating the use of the SCL model in all EU member states. This document remains in effect and continues to shape higher education [4].

The SCL model emphasises active knowledge acquisition by students, engaging them and fostering a sense of personal awareness and autonomy. It focuses on students and their needs, strengthening their characteristics and interests. By placing students at the centre of the educational process, this model enhances their sense of responsibility for academic performance and professional development [5]. The role of instructors has evolved significantly. While they continue to organise the educational process, their focus has shifted towards students' interests and development. Instructors now motivate students to deepen their knowledge by actively employing a variety of teaching methods tailored to meet students' needs and capabilities [6].

Implementing SCL is both challenging and time-consuming for educators. They must design lesson plans tailored to individual students, support them with relevant experiences, and present multiple perspectives on both theoretical and practical issues. Educators provide real-life examples to engage students in reflection, analytical thinking, and critical reasoning. Topics and issues are adjusted to align with students' individual interests and needs, allowing them to deepen their knowledge in areas that captivate them, which in turn enhances information retention.

Instructors work collaboratively with students, guiding and supporting their development. This individualised approach fosters both personal and academic growth for each student [7].

Commonly used student engagement methods in SCL include discussions, seminars, problem-based learning, quizzes, and e-learning. The SCL model also supports practical training sessions where participants acquire profession-specific skills. These sessions can be conducted in various settings to engage students and develop their abilities. The application of diverse methods fosters critical thinking, boosts self-confidence, and enhances social skills that are valuable in professional life [3].

In summary, SCL is considered to be a more effective method than traditional knowledge acquisition approaches. Implementing SCL in medical education is a valuable strategy that enhances the training process for future healthcare professionals. This model, when applied in higher education within medical fields, contributes to knowledge development, skill enhancement, and the cultivation of social competencies, making graduates more appealing to potential employers.

Medical simulations in nursing education

Modern medical simulations have been used since the mid-20th century, starting with the development of the first resuscitation training mannequin. This innovation paved the way for the creation of further models designed for practical exercises. In response to the challenges medical students encountered in developing communication and technical skills, medical simulation training was introduced. Over the years, these training sessions have evolved, now incorporating the latest technologies to reduce the likelihood of medical errors that could occur in real-world scenarios [8].

The SCL model has been effectively integrated into higher education in nursing. Student engagement in this field facilitates hands-on experience, significantly enhancing the understanding of new concepts. It offers students opportunities to demonstrate their skills, think critically, and learn through practical application.

One of the most employed teaching methods in SCL-based medical education is medical simulation. In a medical simulation, a clinical scenario is constructed in which students must apply their knowledge and skills to meet the objectives of the scenario.

These sessions may involve students from a single discipline or various medical fields. Simulations are conducted in a controlled and safe environment using advanced training mannequins or standardised patients, who may be students or specially trained actors. The simulation process is recorded with video cameras, allowing students to review and reflect on

their performance during debriefing, which is a critical component of medical simulations.

This active learning approach enables students to think independently, assess their needs, and evaluate their knowledge and decision-making speed in real-time scenarios. Students cultivate practical skills, social competencies, and teamwork abilities, often within interdisciplinary groups. Following the simulation, a debriefing session is conducted, in which the scenario is analysed, correct and incorrect actions are identified, and students' feelings are discussed. The goal is to draw conclusions that will assist them in handling similar situations in the future. Debriefing promotes critical thinking and deepens students' understanding of complex topics. This teaching method equips students with practical preparation for their professions and clinical placements. It is essential to integrate this approach across various medical fields to simulate real-world working conditions more accurately. Furthermore, inter-professional collaboration in medical simulations enhances teamwork and communication skills, which are vital for developing effective clinical teams in the future [8].

Nursing education in Poland

In Poland, nursing studies are conducted in accordance with the educational standards mandated by the European Union and the principles of the Bologna Process. Education is offered exclusively at the higher-education level [9]. Bachelor's degree programs span six semesters (three years) and require a minimum of 4720 hours of coursework. Poland adheres to the European Credit Transfer and Accumulation System (ECTS), which standardises education across the EU. To complete their first-level education, bachelor's students must earn at least 180 ECTS credits.

The curriculum includes subjects in preclinical sciences, humanities, and core nursing disciplines. This structure provides a comprehensive foundation of knowledge that is further developed through practical training. A strong emphasis is placed on the practical aspects of education and various training modalities. Courses are conducted in a variety of healthcare settings, including hospitals, primary healthcare centres, nursing homes, and more.

The 2024 nursing education standards emphasise the importance of medical simulation training, which must be completed prior to practical classes. These sessions, based on high-fidelity scenarios, are required to last a minimum of 180 hours [11]. The practical training format allows students to acclimate to the profession in real-world conditions, comprehend work organisation, and learn the standards and procedures relevant to specialised departments, primary healthcare facilities, emergency departments, and operating rooms.

The three-year program culminates in a diploma examination, which includes both a theoretical com-

ponent and a practical Objective Structured Clinical Examination (OSCE). Graduates of the first-degree program are eligible to apply for professional licensure and seek employment throughout the European Union [12].

The next stage of nursing education is the master's degree (second-degree) program, which spans four semesters (2 years). This program includes a minimum of 1300 hours of theoretical and practical training. Similar to bachelor's studies, students are required to earn at least 120 ECTS credits.

The curriculum focuses on developing competencies in the education and management of chronic diseases, including COPD, heart failure, diabetes, chronic wounds, cancer, and others. In addition to enhancing their theoretical knowledge, students acquire practical skills and new professional competencies.

The program also provides advanced knowledge and skills in scientific research, enabling them to conduct independent studies and apply their findings in nursing practice. The master's degree program culminates in an examination that assesses learning outcomes and the defence of a research-based master's thesis. Graduates of the second-degree program can pursue further education at the doctoral level, which typically lasts six to eight semesters and culminates in the defence of a doctoral dissertation [13].

Nursing education outside the European union: the case of Turkey

Nursing education in Turkey closely resembles that in Poland. Most Turkish universities comply with standards established in EU countries, including accreditation criteria for nursing programs. Similar to Poland, students in Turkey are required to earn a specific number of ECTS credits, which are awarded for each year of study [14].

Nursing education begins with a Bachelor of Science in Nursing (BSN) degree, which typically spans eight semesters (4 years) and includes 4600 instructional hours. The curriculum includes coursework in natural sciences, medical sciences, social sciences, and advanced professional nursing topics.

Courses have both theoretical and practical components and are conducted in various medical institutions across different levels of care. To obtain a specialised nursing degree, students must earn 240 ECTS credits [15]. Unlike in Poland, the Turkish nursing program does not require final examinations or thesis writing. Upon successful completion of all courses in the curriculum, graduates are awarded the nursing title and can begin their professional careers [16].

Graduates have the opportunity to pursue further education at the master's level, which offers two distinct programs. The first program lasts 2 years (4 semesters) and ends with the defence of a master's thesis; this is the most prevalent format among universities.

The second program extends for an additional year (6 semesters), does not require writing a diploma thesis, and includes a greater number of professional courses that are not related to research [17]. In Turkey, as in Poland, students at the second-degree level receive specialised education [18]. Completing a master's degree in nursing enables students to pursue doctoral studies, where they can develop independent research skills. The third-degree program lasts eight semesters (four years) and concludes with the defence of a doctoral dissertation [19].

Summary

Higher education in nursing increasingly incorporates the SCL system into its curricula. This model, which focuses on the student, promotes active learning while developing practical, social, and teamwork skills. It is tailored to meet students' needs, interests, and educational capabilities, motivating them to acquire knowledge and take responsibility for their learning process.

Nursing education in Poland and Turkey shares many similarities. The study programs incorporate comparable educational components, enabling students to pursue their education in other European countries, such as through Erasmus exchange programs.

However, some differences exist, particularly at the bachelor's degree level. In Poland, nursing programs are one year shorter than those in Turkey, although the total number of instructional hours is greater in Poland. Another significant difference is the degree completion process: in Turkey, students receive a professional nursing title upon successfully completing all coursework, whereas in Poland, they must also pass a final theoretical and practical examination.

At the master's level, both countries offer a two-year program that concludes with the defence of a master's thesis. Doctoral studies in both Poland and Turkey emphasise the development of research skills and culminate in the defence of a doctoral dissertation.

Despite geopolitical and educational differences, Turkish nursing students actively participate in Erasmus+ exchanges at *Collegium Medicum*, Faculty of Health Sciences. These academic exchanges offer valuable educational experiences for both faculty members and students, with repeated visits enhancing the effectiveness of this educational model.

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Conflict of interest

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