



IMPLEMENTATION OF THE OSCE METHOD TO IMPROVE GRADUATE QUALITY IN PLANNING A RADIOLOGY STUDENT SKILLS ASSESSMENT MODEL

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Abstract

OSCE stands for Objective Structured Clinical Examination, a testing method used in the medical and healthcare fields to evaluate a person's clinical skills. OSCE combines the objective and structured aspects of testing to evaluate clinical skills such as physical examination, communication, and diagnosis. The OSCE method measures graduates' abilities using a comprehensive testing method that produces competent graduates. This study aims to investigate how educational institutions plan and organize OSCE exams as a means of evaluating radiology students' skills. The study was conducted at the Radiology Study Program at Poltekkes Kemenkes Semarang in November-December 2022. This qualitative study uses a literature review method that involves searching electronic databases using Boolean Search methods and predetermined keywords. The data obtained were filtered, evaluated, and then reviewed. The study results show that in planning a model for assessing radiology students' skills using the OSCE method, the PDCA (Plan-Do-Check-Act) approach based on Walter Shewhart's theory is effective. PDCA is useful for management as a working pattern to implement quality changes and measure and continuously improve them. The institution's quality control program involves joint commitment with management, planning, implementation, and evaluation. The PDCA approach can improve the effectiveness of monitoring activities in institutional quality control.

Keywords: Management, PDCA, OSCE.

INTRODUCTION

Before providing direct services to the community, a healthcare graduate must master the competencies required in the working world. These competencies will be used by a healthcare professional to provide optimal care to their clients. Competencies can be described as the ability to perform a task, role or duty, the ability to integrate knowledge, skills, attitudes and personal values, and the ability to build knowledge and skills based on experience and learning. Someone is considered competent if they can reflect their ability to apply their knowledge in specific or real situations (Nurdiyan, et al., 2016). Assessing whether a student is competent or not requires an assessment called student assessment. Student assessment is one of the determinants to determine the success or even failure of the learning process. In health education, various assessment methods are known to evaluate the teaching and learning process, both formative and summative, in accordance with competencies. These competencies are not only cognitive but holistic, including skill competencies. One of the clinical skill evaluation methods widely used in healthcare is the objective structured clinical examination (OSCE). The Association for Medical Education in Europe (AMEE) recommends that OSCE be used as one of the methods for assessing learning outcome competencies. OSCE can assess clinical skills, practical procedures, patient investigations, patient management, health promotion and disease prevention, communication, information management, social principles, basic and clinical skills; attitude, ethical and legal responsibility; decision-making, reasoning and clinical decisions; professional behavior and personal development. OSCE is an assessment technique in which students demonstrate their competencies in several simulation conditions (Watson et al., 2002). OSCE is a tool to assess clinical competency components such



as history taking, physical examination, procedural skills, communication skills, lab result interpretation, management, and others that are tested using a known checklist. OSCE is part of the assessment system. The purpose of OSCE is to objectively and structuredly assess the clinical competencies and skills of students. OSCE was first developed in the 1970s as one of the clinical assessment methods (Marion et al., 2012). OSCE was first adopted by North America and then widely developed in the UK in the 1990s. OSCE is now used to assess clinical skills in midwifery faculties and doctor certification in the USA, Canada, UK, Australia, New Zealand, and other countries. The Indonesian Association of Radiographer Education Institutions (AIPRI) as an association that provides radiographer personnel in Indonesia has not conducted a skills test (OSCE) as is done by the Indonesian Midwives Association (IBI) or the Indonesian National Nurses Association (PPNI). The implementation of clinical skills OSCE is aimed at fulfilling the radiographer personnel market share so that radiographer graduates can work according to the clinical skills tested by the OSCE method. Based on this, planning for the implementation of the OSCE method as an assessment of clinical practice for Radiology students is needed. Planning is the key to the success of the OSCE examination. One theory put forward by experts needed in planning to improve the quality of education is PDC. PDCA stands for Plan, Do, Check, and Act, which is a continuous process improvement cycle, like an endless circle. A four-step problem-solving process commonly used in quality control is PDCA, which stands for "Plan, Do, Check, Act" (Plan, Do, Check, and Act).

RESEARCH METHODS

Judging from the nature of the data, the research approach used in this study is qualitative. What is meant by qualitative research, namely. research that tries to understand the phenomena experienced by researchers holistically, through verbal and linguistic descriptions, in certain natural contexts and through various scientific methods. . The purpose of the qualitative research used in this study was to obtain information about the role of management in designing a competency evaluation model for radiology students using the OSCE method to improve the quality of graduates. The study was conducted at the Radiology Section, Poltekkes, Ministry of Health, Semarang, and November-December 2022. The research object can be stated as a social research situation in which someone wants to know what is happening in it. At this research location, researchers can closely observe the activities of actors in certain locations. The subjects of this study were students majoring in radiology at the Poltekkes, Ministry of Health, and Semarang. The data collection method in this study was interview, which is a type of information gathering that was carried out orally in one direction face to face with a predetermined direction and purpose. Collecting data through interviews has several advantages, among others. The interviewer can directly contact invaluable, the information is deepened, the interviewee can express his heart more broadly, and questions that are not clear can be repeated and directed. More significant. Interviews were conducted carefully and unstructured according to the instructions given to the research subjects. The interview technique provides information about the role of management in designing a competency assessment model for radiology students to improve the quality of graduates using the OSCE method.

Qualitative research must reveal objective truths. Therefore, data validity is very important in qualitative research. The credibility (trust) of qualitative research can be achieved through the validity of the data. In this study, triangulation was carried out to maintain the accuracy of the data. Triangulation is a data validation technique that uses something other than the data for the purpose of validating or comparing data. To fulfill the validity of this study, data



triangulation was carried out with the source. According to Patton, triangulation with sources means comparing and verifying the reliability of information obtained through different times and qualitative research instruments. In this study, source triangulation was carried out. The results of the interviews were compared with the contents of the additional documents. The data analysis technique used in this study must use qualitative research steps proposed by Burhan Bungin (2003), namely as follows:

1. Data collection

Data collection is an important part of data analysis activities. In this study, data were collected through interviews and document studies.

2. Data reduction

Data reduction is defined as a selection process that pays attention to the simplification and transformation of the raw data generated by field written records. Reduction is carried out starting from the beginning of data collection by summarizing, coding, tracking themes, creating clusters, writing notes, etc. with the aim of eliminating redundant data.

3. View the data

Data visualization is a description of a structured set of information that provides an opportunity to draw conclusions and take action. Qualitative information is presented in the form of narrative text. The representation can also be in the form of matrices, diagrams, tables and graphs.

4. Confirm and confirm conclusions (Conclude and confirm)

This is the last activity of data analysis. Draw conclusions in the form of interpretation, that is, H. finds meaning from the information presented. Between looking at data and drawing conclusions, there are data analysis skills. In this sense, qualitative data analysis is an ongoing, iterative, and continuous endeavor. The problems of data reduction, data representation, and inference/verification become success stories as a series of interrelated analysis activities.

RESULTS AND DISCUSSION

The effectiveness of using the OSCE method as an assessment of clinical practice for radiology students is done with the theory developed by Dr. Walter Edward Deming known as "The Deming Wheel". The Plan Do Check and Act (PDCA) cycle is useful as a work pattern in the organizational or institutional system and adds knowledge to implement the improvement of the quality of radiology graduate, as well as measure and make continuous improvements. The involvement of management from radiology educational institutions as quality controllers of educational institutions is needed, namely in planning, implementation, examination/assessment, and quality improvement results in radiology educational institutions using the PDCA approach. Plan, the planning activities carried out by the management of radiology educational institutions are to prepare a plan and schedule for clinical practice tests for students using the OSCE method (Rehani et al., 2017; Bouthillier et al., 2023). Do, the implementation of clinical practice testing for students using the OSCE method begins with the activity of creating an OSCE testing instrument for Radiology and preparing a report of the results (Lorenzo et al., 2018). Check, the assessment stage is summarizing all the data results from the instruments prepared to find out the obstacles faced by radiology educational institutions, then guidance is given as a follow-up activity (Robbins et al., 2020). Action, the stage of improving the quality of radiographer graduates is to analyze the data obtained by management in carrying out continuous quality improvement activities at the institution,



meaning that after having enough data on the shortcomings and weaknesses of the institution, solutions are sought to minimize the problems that exist in the Radiology educational institution.

CONCLUSION

The implementation of OSCE as a method for assessing clinical competence of students is very good to be applied in the Radiology study program at Poltekkes Kemenkes Semarang. However, the use of OSCE as the only method of assessing clinical competence of students is considered not yet feasible, so the existence of formative tests in student skills lab activities is also considered necessary to assess clinical competence of students. The obstacles in the implementation process and the lack of student competence can be overcome with good planning from both the program institution as the OSCE implementer and the students as OSCE participants. The results of planning activities to improve the quality of radiology education graduates have contributed positively to the success of radiology educational institutions, thus bringing significant changes in the management of Radiology institutions by involving all components within the Radiology institution.

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