Research and Exploration on Learning Evaluation System of Clinical Professional Course Under the Background of Phased Examination for Licensed Physicians

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Abstract. Under the background of phased examination of practicing physicians, the connotation construction of promoting learning evaluation system based on classroom evaluation, probation evaluation and practice evaluation is established to cultivate medical students' medical ethics and clinical practice ability. Strengthening the process management and evaluation centered on medical students is the core content of the evaluation system for promoting learning.

Introduction

The assessment for learning has gradually developed into a special evaluation method which is valued by educated researchers and decision makers. It has not only become a means for teachers to promote students' learning in schools, but also been incorporated into educational policies of many countries and regions, and has become the basis of the reform of the evaluation system. "Student-centered" is a foothold in our school's "three-oriented" talent training concept in the teaching process. It pays attention to improving students' learning efficiency and learning effect, cultivating students' self-learning ability, communication, cooperation and teamwork spirit, analysis and problem-solving ability.

Promote the Preliminary Understanding of Learning Evaluation

Harry Black put forward the assessment for learning as early as 1986 [1]. Assessment for learning is a part of daily practice among students, teachers and peers. It seeks, reflects and responds to the information obtained from dialogue, presentation and observation to promote ongoing learning [2]. Assessment for learning is different from formative evaluation. Traditional formative evaluation is to evaluate whether students have mastered the criteria, while assessment for learning focuses on how students make progress every day in the process of achieving their goals under the guidance of teachers, and informs the users of evaluation, whether and when students can master the knowledge, reasoning, expressive skills and development abilities contained in the criteria. In addition, the assessment for learning emphasizes the role of students in evaluation. Its purpose is to help students understand their own learning. Students are also teaching decision-makers that decide future teaching and learning activities based on Evaluation information. [3]

In recent years, the assessment for learning has gradually developed into a special evaluation method which is valued by educated researchers and decision makers. It has not only become a means for teachers to promote students' learning in schools, but also been incorporated into educational policies of many countries and regions, and has become the basis of the reform of the evaluation system. "Student-centered" is a foothold in our school's "three-oriented" talent training concept in the teaching process. It pays attention to improving students' learning efficiency and
learning effect, cultivating students’ self-learning ability, communication, cooperation and
teamwork spirit, analysis and problem-solving ability.

Establish a Learning-Promoting Evaluation System for Teaching Clinical Courses

Construct a scientific evaluation system for promoting learning, and use comprehensive,
comprehensive and dynamic methods to effectively assess the progress of students’ professional
spirit, professional ability and social adaptation. Students not only get excellent results, but also
stimulate the potential for other aspects to achieve comprehensive development.

In the cognitive development of medical students, there exists the development of professional
thinking, which emphasizes both memory and comprehension, and then the development of
comprehensive application ability, which emphasizes association. According to this characteristic,
the corresponding evaluation system of promoting learning should be different form different stages
of medical education, and the assessment of basic courses should strengthen students’ self-study
ability and comprehensive induction. The training guidance of ability, the course stage of clinical
specialty, the examination methods and contents should embody the training of divergent thinking,
comprehensive application ability and problem solving ability. Therefore, in different stages, the
Corresponding indicators of the curriculum evaluation system should be focused on the assessment
of students' ability to use knowledge flexibly, so as to avoid the repetition of the "exam-oriented
education".

Classroom Evaluation System

The curriculum evaluation system consists of four parts: 1. Classroom questioning: classroom
questioning for students in the course of theoretical course of clinical specialty, recording and
scoring students' emotional state and preview review. 2. Discussions on difficult cases: Students are
regularly organized to discuss difficult cases, focusing on the whole process of learning by
examining students' learning concentration, participation status, ability to acquire and use
information. 3. New Progress Report (PPT Group Speech): New progress research is carried out in
the form of group literature review and PPT lecture on disease recognition, etiology, treatment and
other aspects, which promotes the cultivation of students' autonomous learning ability, team
cooperation ability, problem solving ability and language expression ability. 4. Test bank
application: The use of Test Bank of periodic examination plays a "temporary" role in the
curriculum evaluation system. Before the examination, relevant simulated tests are transmitted to
students by means of information technology (QQ group, Wechat group, etc.). Students use
scientific review strategies and accurate dynamic memory learning test questions to make adequate
preparations for periodic examination.

Internship Evaluation System

In the course of theoretical study, corresponding probation courses will be arranged. An effective
probation evaluation system will be constructed by writing probation notes, simulating interrogation
between students and bedside interrogation, and physical examination between students and bedside
physical examination. Writing probationary notes is to follow the teachers to inquire patients, train
students' communication ability between doctors and patients, integrate information ability, and
reflect on their professional feelings. Simulate interrogation between students and bedside
interrogation focus on training the ability of analysis, oral expression and learning and reprocessing.
Not only can we experience the role of doctor in the simulation, but also from the perspective of
patients, we can deepen our impression of emotional cognition and disease understanding. Physical
examination between students and bedside physical examination is to extract information, language
expression and psychological endurance and other abilities.

Practice Evaluation System

Practice evaluation system is composed of bedside assessment, objective structured clinical
examination and theoretical test. Bedside assessment focuses on cultivating doctor-patient
communication ability, problem analysis ability and practical ability by collecting medical history, systematic evaluation, executing operation and carrying out health education. Objectively structured clinical examination is OSCE examination. Students use information to train clinical procedural thinking, diagnostic thinking and practical operation ability through different examination stations to operate and answer questions. In order to test the effect of rotating practice and cultivate students' ability to analyze, solve and systematically summarize problems by using information, the theoretical test is carried out before rotating the next department during the practice period.

**Explore the Way to Implement the Assessment for Learning and Adapt to the Phased Examination Model of Licensed Physicians**

The National Certified Physician Qualification Examination (NCQE) is not only the industry accesses examination, but also the core content of the Licensed Physician Law and the doctor management system. In 2015, the National Medical Examination Center (NMETC) took clinical medicine as the research object. According to geographical distribution, educational level and participation intention, it carried out the phased examination of clinical practitioners in 33 medical colleges and universities (the first phase). Our school participated in the phased examination of clinical practitioner qualification in 2016, 2017 and 2018.

The empirical research examination is mainly divided into two stages, that is, the current examination for practicing physicians are divided into two stages: the first stage is arranged before the students complete the course and enter the clinical practice (that is, at the end of the Fourth academic year). Only those with qualified results can carry out the clinical practice; the second stage is still carried out according to the current stipulated time. The first stage examinations are designed to test whether medical students possess the basic medical theory, basic knowledge and basic clinical skills required by clinical practice, and whether they can understand and apply important medical knowledge to clinical practice under the guidance of their superior physicians, so as to reflect their clinical thinking and post competence. It is mainly divided into basic medical knowledge examination and basic clinical skills examination: the main form of basic medical knowledge examination are computerized examination; the main form of skill examination is objective structured clinical examination (OSCE), including inquiry, physical examination, skill operation, and evaluation of communication and humanistic care. From the reform content of phased examination for practicing physicians, higher requirements are put forward for the basic theoretical knowledge and clinical operation skills required by clinical medical undergraduates, and more attention is paid to their post competency.

This paper probes into the students' performance in 2017 and 2018: 1129 students passed the actual examination in 2017, with a minimum score of 42.5 and a maximum score of 95.6, with an average score of 80.2 and 1105 passing, with a passing rate of 97.87%.

In 2018, 896 students passed the exam, with a minimum score of 43, a maximum score of 95.05, an average score of 81.38, 884 passing, and a passing rate of 98.66%.

<table>
<thead>
<tr>
<th>Year</th>
<th>T: Number of participants</th>
<th>T: Passing Number</th>
<th>T: Passing rate</th>
<th>S: Number of participants</th>
<th>S: Passing Number</th>
<th>S: Passing rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1148</td>
<td>544</td>
<td>47.39%</td>
<td>1129</td>
<td>1105</td>
<td>97.87%</td>
</tr>
<tr>
<td>2018</td>
<td>894</td>
<td>632</td>
<td>70.70%</td>
<td>896</td>
<td>884</td>
<td>98.66%</td>
</tr>
</tbody>
</table>

\[(T: \text{the Theoretical examination}, \ S: \text{the Skill test})\]

Chi-Square \( \chi^2 = 102.0012, P = 0.0001 \). From the statistics, we can see that the passing rate of our school in 2018 is significantly higher than that in 2017, with statistical significance.

Compared with the traditional curriculum "one test is sure to succeed or fail", the evaluation system of promoting learning to emphasize the student-centered process assessment, which will undoubtedly greatly increase the workload and difficulty of teachers in the specific implementation process. In the process of teaching, teachers need to devote considerable energy to research and
design how to carry out classroom questioning, discussion and interaction, organize discussion of difficult cases and report on new progress, which requires corresponding guarantees of the system to improve the enthusiasm for teachers.

The assessment for learning is not only the end of the teaching process and the teaching management process, but also the beginning of the next similar process. It has certain diagnostic and appraisal functions. The information obtained through the analysis of comprehensive and scientific evaluation results is not only conducive to improving teaching methods and means, guiding students to study correctly and effectively, but also to improving teaching quality, improving examination design and improving the quality of examination proposition. They are of great benefit, and this is often a link that colleges and universities generally do not attach importance to.

**Conclusion**

Improving the quality of medical education is a complex and systematic project, involving educational and teaching concepts, reforming teaching content and curriculum system, innovating teaching methods, evaluation and assessment methods, medical students' medical ethics and clinical practice ability, etc. Especially, the cultivation of post competency lays stress on the cultivation of knowledge, quality and ability, and the strengthening of process management and process evaluation is the core. Content, the introduction to assessment for learning is the key to cultivate medical students, which is more conducive to improving students' theoretical learning integration ability and practical ability under the background of phased examination of practicing physicians.

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**References**

