

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

compare the effects of traditional teaching and interactive teaching using the ClassPoint tool on learning outcomes and student satisfaction among operating room students

Protocol summary

Study aim

Determining the effectiveness and satisfaction of Operating Room students in using an interactive classroom in the course "Ophthalmic Operating Room Technology" among continuous and discontinuous bachelor's students of the Operating Room program at the Faculty of Paramedical Sciences, Semnan University of Medical Sciences.

Design

The samples will be selected through convenience sampling. The study will be conducted on 13 continuous bachelor's students and 13 discontinuous bachelor's students of the Operating Room program at the Faculty of Paramedical Sciences, Semnan University of Medical Sciences.

Settings and conduct

The samples will be selected through convenience sampling. Students will receive the first 4 weeks of their course using the traditional teaching method, and the second 4 weeks through an interactive classroom approach. For each instructional period (4 weeks), a pre-test based on the course content will be administered at the beginning of the sessions, and after the 4-week period, a post-test with similar questions based on the same core concepts will be conducted. Additionally, in order to assess student satisfaction, the standard Students' Evaluation of Educational Quality (SEEQ) questionnaire will be used at the end of the instructional period.

Participants/Inclusion and exclusion criteria

Fourth-semester continuous bachelor's students and third-semester discontinuous bachelor's students of the Operating Room program at the Faculty of Paramedical Sciences, Semnan University of Medical Sciences.

Intervention groups

The use of the ClassPoint tool, which is an interactive classroom tool designed to increase engagement and

improve learners' performance in various subjects.

Main outcome variables

Students' learning level and students' satisfaction

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20260201068716N1**

Registration date: **2026-04-16, 1405/01/27**

Registration timing: **prospective**

Last update: **2026-04-16, 1405/01/27**

Update count: **0**

Registration date

2026-04-16, 1405/01/27

Registrant information

Name

Farzaneh Kermani

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 23 3105 2120

Email address

f-kermani@semums.ac.ir

Recruitment status

recruiting

Funding source

Expected recruitment start date

2026-04-21, 1405/02/01

Expected recruitment end date

2026-09-22, 1405/06/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

compare the effects of traditional teaching and interactive teaching using the ClassPoint tool on learning outcomes and student satisfaction among operating room students

Public title

Reviewing the impact of teaching using the ClassPoint tool in the field of education

Purpose

Education/Guidance

Inclusion/Exclusion criteria**Inclusion criteria:**

fourth-semester continuous bachelor's students and third-semester discontinuous bachelor's students of Operating Room, Faculty of Paramedical Sciences, Semnan University of Medical Sciences

Exclusion criteria:**Age**

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 25

Randomization (investigator's opinion)

N/A

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Single

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

The Specialized Committee on Ethics in Biomedical Research

Street address

Basij Boulevard, Headquarters of Semnan University of Medical Sciences and Health Services, Semnan

City

Semnan

Province

Semnan

Postal code

35147-99442

Approval date

2025-08-18, 1404/05/27

Ethics committee reference number

IR.SEMUMS.REC.1404.136

Health conditions studied**1****Description of health condition studied**

Students' learning level and satisfaction

ICD-10 code

-

ICD-10 code description

-

Primary outcomes**1****Description**

The students' learning level, which is obtained by comparing their scores on the pre-test and post-test

Timepoint

In the first week of the course and in the fourth week of the course after implementing the interactive classroom method

Method of measurement

Pre-test and post-test

2**Description**

Students' satisfaction

Timepoint

In the 8th week of holding the class

Method of measurement

standard Students' Evaluation of Educational Quality (SEEQ) questionnaire

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: In each academic semester, students will receive the first four weeks of their course through a traditional teaching method and the second four weeks through an interactive classroom approach. The instructional design for both formats will be based on the ADDIE model. The structure of the traditional classroom will include lecture-based teaching accompanied by standard PowerPoint slides containing text and images. The interactive classroom, however, will consist of

interactive slides incorporating short quizzes, videos, interactive links, and in-class questions. In the first week of the semester, a pre-test will be administered to assess students' baseline knowledge related to the content covered in the first four weeks. After completing the traditional teaching sessions during these four weeks, a post-test using the same questions as the pre-test will be conducted at the end of week four. In week five, the interactive classroom phase will begin with a new pre-test, followed by weekly interactive instruction for four weeks. A post-test related to the content taught during weeks five to eight will be administered at the end of week eight. Additionally, at the end of week eight, a standardized satisfaction questionnaire will be distributed to measure students' satisfaction with both the traditional and interactive teaching methods. This procedure will be implemented over two academic semesters for operating room students. The teaching environment, location, and instructional hours will remain constant and aligned with the students' weekly schedule.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Paramedical faculty, Semnan University of Medical Sciences

Full name of responsible person

Farzaneh Kermani

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Semnan Province - Kilometer 5, Damghan Road - Education and Research Campus, Semnan University of Medical Sciences and Health Services, Semnan, Iran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Farzaneh Kermani

Street address

Headquarter of Semnan University of Medical Sciences and Health Services, Bassij Blvd, Semnan,

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Semnan University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Farzaneh Kermani

Position

Assistant professor

Latest degree

Ph.D.

Other areas of specialty/work

Medical Informatics

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No more information is available.

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available

Person responsible for updating data

Contact

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Farzaneh Kermani

Position

Assistant professor