Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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Recruitment status

Recruitment complete

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 Sciecnes

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

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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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Person responsible for updating data

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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