

Clinical Trial Protocol

Iranian Registry of Clinical Trials

14 Jul 2026

Comparison of academic achievement and students' satisfaction in two instructional methods in emergency medicine clerkship in kermanshah University of Medical Sciences: lecture-based and flipped classroom

Protocol summary

Summary

Aim: To investigate how new instructional method (flipped classroom) can influence academic achievement of students and satisfaction. **Inclusion/exclusion criteria:** all medical students participate in emergency ward rotation during 6 consequent months in the first and second semester of 1394-95 educational calendars. **Exclusion:** students who failed and have to repeat rotation. All students who participate in one- month emergency ward rotation in six consequent months will enter the study (6-8 students/group). Each faculty would prepare 4 topics in flipped and lecture methods. We randomly assign method of presentation for each topic for the first group, i.e. among 4 topics two of them would be presented in flipped method and two by lecture, and it would be vice versa in the next group. **Intervention design:** To avoid contamination; e-contents would be available via Learning Management System (LMS) of Tehran University of Medical Sciences (<http://namad.tums.ac.ir>) which is not downloadable. We provide participants with username and password (1 month subscription) and a research guideline; Students will study e-contents before classes. At the beginning of session students should take a quiz (pretest). In face to face classes, faculty members present cases to be discussed by students. In control group, lecture sessions will be held as usual. At the end of each class a researcher-made satisfaction questionnaire (valid & reliable) would be given to students. At the end of each rotation a final exam would be taken (post test). To evaluate academic achievements (primary outcome), results of two groups would be compared..

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015122123982N2**

Registration date: **2016-03-03, 1394/12/13**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2016-03-03, 1394/12/13

Registrant information

Name

Rita Mojtahedzadeh

Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 8897 8088

Email address

r_mojtahedzadeh@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor of Research, Tehran University of Medical Sciences

Expected recruitment start date

2016-03-05, 1394/12/15

Expected recruitment end date

2016-08-05, 1395/05/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of academic achievement and students' satisfaction in two instructional methods in emergency medicine clerkship in kermanshah University of Medical Sciences: lecture-based and flipped classroom

Public title

Comparing the effect of flipped classroom and lecture in academic achievement and satisfaction of medical students

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criterion: all medical students who participate in emergency ward of kermanshah Imam Reza Hospital during 6 consequent months in the first and second semester of 1394-95 educational calendar. Exclusion criterion: student who had failed and have to repeat their rotation.

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 58

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

1

Registry name

-

Secondary trial Id

-

Registration date

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Tehran University of Medical sciences

Street address

Ethics Committee-technology and research office-
Ghods st.-keshavarz Blvd.-Tehran-Iran

City

Tehran

Postal code

Approval date

2015-11-09, 1394/08/18

Ethics committee reference number

IR.TUMS.REC.1394.1126

Health conditions studied

1

Description of health condition studied

academic achievement

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

academic achievement

Timepoint

before and at the end of the intervention

Method of measurement

exam questions

Secondary outcomes

1

Description

Students' satisfaction

Timepoint

After the intervention

Method of measurement

Questionnaire

Intervention groups

1

Description

lecture based classes for one month

Category

Other

2

Description

flipped classroom for one month

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Imam Reza Hospital
Full name of responsible person
Dr. Sayed Ali Hoseini
Street address
City
Kermanshah

Fax
Email
a-shabani@farabi.tums.ac.ir
Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice Chancellor of Research, Tehran University of Medical Sciences
Full name of responsible person
Dr. Masoud Yunesian
Street address
6th floor, Deputy of Research and Technology,
Campus of Tehran University of Medical Sciences,
Ghods st., Keshavarz Blvd.
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Tehran
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Vice Chancellor of Research, Tehran University of Medical Sciences
Proportion provided by this source
100
Public or private sector
empty
Domestic or foreign origin
empty
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
empty

Person responsible for general inquiries

Contact

Name of organization / entity
Virtual School of Tehran University of Medical Sciences
Full name of responsible person
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Person responsible for updating data

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Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report
empty
Analytic Code

empty
Data Dictionary
empty