Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

Artificial Intelligence Assistant and Acceptance and Commitment Therapy (ACT) on Academic Self-Efficacy, Academic Engagement, Social Interaction, and Self-Regulation among Bilingual Seventh Grade Male Students in Suburban Areas of Ahvaz

Protocol summary

Study aim
Comparing the Effects of an Artificial Intelligence Assistant and Acceptance and Commitment Therapy (ACT) on Academic Self-Efficacy, Academic Engagement, Social Interaction, and Self-Regulation among Seventh-Grade Bilingual Male Students in Suburban Areas of Ahvaz

Design
A pretest-posttest controlled experimental design; single-blind

Settings and conduct
“This research will be conducted in schools in the suburban areas of Ahvaz among seventh-grade bilingual male students (Arabic as mother tongue and Persian as the language of instruction). The sampling process will be cluster random sampling, and participants will be single-blind regarding the allocation of other individuals to intervention groups.”

Participants/Inclusion and exclusion criteria
Enrollment in the seventh grade Bilingualism (native language: Arabic) Residence in suburban areas of Ahvaz Submission of informed consent by both the student and their parents Adequate access to the internet and digital devices No concurrent psychological interventions No severe psychological disorders (as confirmed by school counselors) Regular attendance at school

Intervention groups
1-AI Assistant Group 2-ACT Group 3-Control Group

Main outcome variables
“Improvement in Academic Self-Efficacy, Self-Regulation, Academic Engagement, and Social Interaction among Seventh-Grade Bilingual Male Students in Suburban Areas of Ahvaz through Training in the Use of Artificial Intelligence Assistant and ACT”

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20250608066124N1**
Registration date: **2025-06-20, 1404/03/30**
Registration timing: **prospective**

Last update: **2025-06-20, 1404/03/30**
Update count: **0**

Registration date
2025-06-20, 1404/03/30

Registrant information

Name
Khaled Loveymi

Name of organization / entity

Country
Iran (Islamic Republic of)

Phone
+98 921 757 4403

Email address
khled.loveymi@iau.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2025-09-22, 1404/06/31

Expected recruitment end date
2025-12-20, 1404/09/29

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date

empty

Scientific title
Artificial Intelligence Assistant and Acceptance and Commitment Therapy (ACT) on Academic Self-Efficacy, Academic Engagement, Social Interaction, and Self-Regulation among Bilingual Seventh Grade Male Students in Suburban Areas of Ahvaz

Public title
"Comparison of the Effects of an AI Assistant and ACT on Bilingual Students"

Purpose
Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:
Enrollment in the seventh grade Bilingualism (native language: Arabic) Residence in suburban areas of Ahvaz Submission of informed consent by both the student and their parents Adequate access to the internet and digital devices No concurrent psychological interventions No severe psychological disorders (as confirmed by school counselors) Regular attendance at school

Exclusion criteria:
Simultaneous participation in similar interventions Suffering from severe psychological disorders (as confirmed by school counselors) Lack of access to digital devices

Age
No age limit

Gender
Male

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **120**

Randomization (investigator's opinion)
Randomized

Randomization description
Sample allocation will be conducted using a computerized randomization method (via the online randomization platform Randomizer.org) to minimize the risk of allocation bias. Accordingly, each participant will have an equal chance of being assigned to the AI-assisted instruction group, the Acceptance and Commitment Therapy (ACT) group, or the control group (receiving conventional school instruction).

Blinding (investigator's opinion)
Single blinded

Blinding description
In this study, only participants are blinded to the study group allocation and are unaware of the quality of allocation to intervention and control groups.

Placebo
Not used

Assignment
Parallel

Other design features
Integration of technology with traditional psychological approaches for educational functions.Alternative translations:

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of Islamic Azad University

Street address
"Unit 8, Arsham Complex, Corner of Shams Street and Firouzeh Street, Golestan, Ahvaz"

City
Ahvaz

Province
Khouzestan

Postal code
6136616804

Approval date
2024-10-21, 1403/07/30

Ethics committee reference number
IR.IAU.AHVAZ.REC.1403.397

Health conditions studied

1

Description of health condition studied
"In this research, no specific disease is studied; rather, the effect of artificial intelligence assistant and ACT on academic self-efficacy, self-regulation, academic engagement, and social interaction among seventh-grade bilingual male students in suburban areas of Ahvaz is measure

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
1. Academic Self-Efficacy:Conceptual Definition: An individual's belief in their capabilities to successfully perform academic tasks (Bandura, 1997)Operational Definition: The score that an individual obtains on the Academic Self-Efficacy Scale (Midgley et al., 2000).2. Academic Engagement:Conceptual Definition: Academic engagement is defined as a multidimensional construct that includes a set of behaviors, emotions, and cognitive processes that students demonstrate during learning and academic activities (Fredricks et al., 2004)Operational Definition: In this research, academic engagement is measured through the score that students obtain on the Academic Engagement Questionnaire by Reeve and Tseng (2011).3. Social Interaction:Conceptual Definition: The ability to establish effective communication with

peers and teachers in the educational environment (Rubin et al., 2006)Operational Definition: The score that an individual obtains on the Social Interaction Questionnaire (Gresham & Elliott, 2008).4. Self-Regulation:Conceptual Definition: The ability to control, monitor, and regulate behavior, cognition, and emotion toward achieving goals (Zimmerman, 2000)Operational Definition: The score that an individual obtains on the Academic Self-Regulation Questionnaire (Pintrich & De Groot, 1990).

Timepoint

The pretest was conducted one week before the intervention. The intervention itself lasted for eight weeks, with one 90-minute session per week for the AI assistant and ACT groups. The posttest was administered after the intervention, and the follow-up was conducted one month after the intervention.

Method of measurement

1. Academic Self-Efficacy:Conceptual Definition: An individual's belief in their capabilities to successfully perform academic tasks (Bandura, 1997)Operational Definition: The score that an individual obtains on the Academic Self-Efficacy Scale (Midgley et al., 2000).2. Academic Engagement:Conceptual Definition: Academic engagement is defined as a multidimensional construct that includes a set of behaviors, emotions, and cognitive processes that students demonstrate during learning and academic activities (Fredricks et al., 2004)Operational Definition: In this research, academic engagement is measured through the score that students obtain on the Academic Engagement Questionnaire by Reeve and Tseng (2011).3. Social Interaction:Conceptual Definition: The ability to establish effective communication with peers and teachers in the educational environment (Rubin et al., 2006)Operational Definition: The score that an individual obtains on the Social Interaction Questionnaire (Gresham & Elliott, 2008).4. Self-Regulation:Conceptual Definition: The ability to control, monitor, and regulate behavior, cognition, and emotion toward achieving goals (Zimmerman, 2000)Operational Definition: The score that an individual obtains on the Academic Self-Regulation Questionnaire (Pintrich & De Groot, 1990).

Secondary outcomes

empty

Intervention groups

1

Description

Intervention Group: 1- AI assistant group

Category

Other

2

Description

"Intervention group: 2-ACT"

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center

0

Full name of responsible person

0

Street address

Ahvaz - Golestan - Saadi Street, Shams Street, Corner of Firoozeh, Arsham Complex, Unit 8

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Ahwaz

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Khouzestan

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Phone

+98 916 777 7309

Email

khaled.loveymi@iau.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Dr. Mehregan

Street address

Unit 8, Arsham Complex, Corner of Firoozeh and Shams Street, Golestan, Ahvaz

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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

Islamic Azad University

Proportion provided by this source

100

Public or private sector

Private

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
Islamic Azad University

Full name of responsible person
khaled loveymi

Position
Student

Latest degree
Master

Other areas of specialty/work
Psychology

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Position
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available

Study Protocol
Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available

Analytic Code
Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available