



Teaching Trends in Parasitology

FROM FACULTY AND
STUDENTS' PERSPECTIVE

INTRODUCTION

- The integration of educational technology in medical education is becoming increasingly popular
- Parasitology is a morphologic science that requires visual learning and diversity of teaching methods to create an interesting course to students

OBJECTIVES

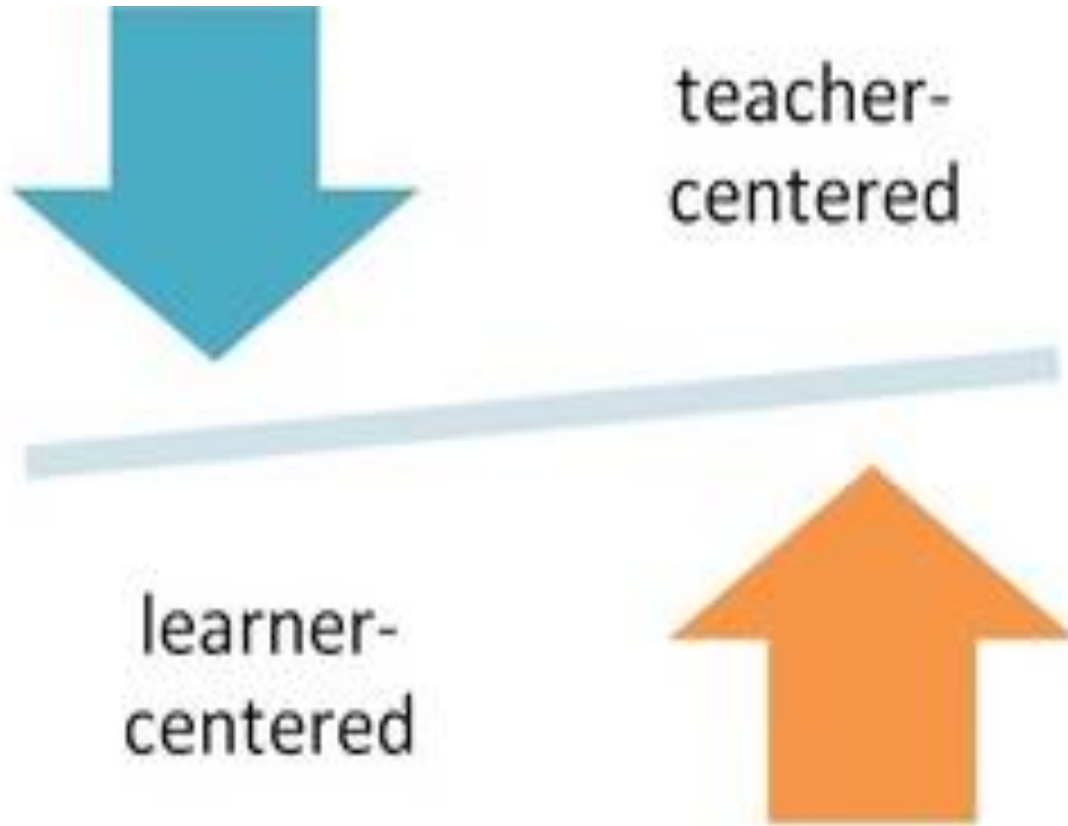


Teaching methods

Students' perception

Our focused study

TEACHING METHODS

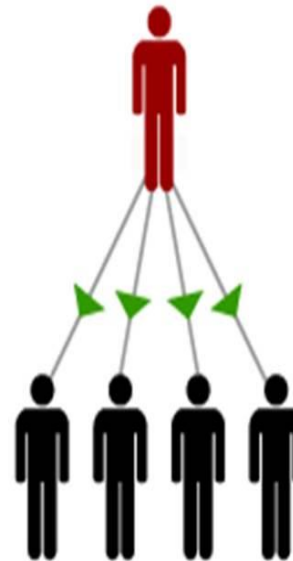


TEACHING METHODS IN PARASITOLOGY

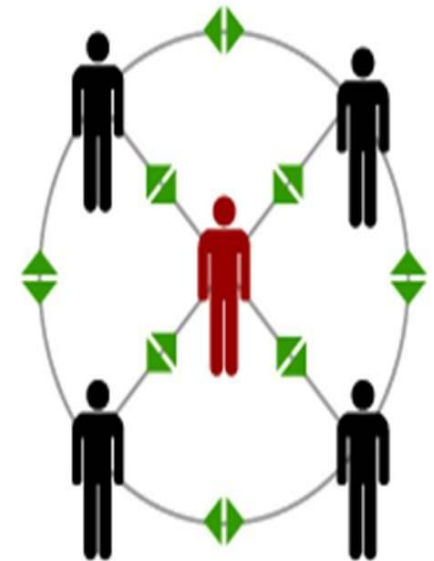
I: SMALL GROUP TEACHING

II: LARGE GROUP TEACHING

Teacher
Directed



Learner
Directed



1) SMALL GROUP TEACHING/LEARNING



LEARNER -CENTERED EDUCATION

The role of the students here is positive and the faculty role is to guide the students rather than conveying information, which eliminates the passive role of students

centered
student
learning

SMALL GROUP TEACHING

- Small Group discussion
- Case based learning
- Problem based learning
- Self directed learning
- Computer assisted self learning



A) SMALL GROUP DISCUSSION



SMALL GROUP DISCUSSION (SGD) (5%)

- The students are divided into groups (4-5 students /each)
- Prior to the session ,the topic will be sent to all students through D2L (**Anemia in parasitic infections**)
- Students should prepare the topic using textbooks, lecture notes or online parasitology websites
- It can be covered in 1-2 sessions (according to the topic weight)



SGD CONT.

- Open discussion will be done under supervision of the faculty to cover any difficult points and fill any gaps
- The topic should be presented by one student from each group in the next session



B) CASE BASED LEARNING



CASE BASED LEARNING (CBL) (5%)

- The students are divided into groups (4-5 students/each)
- The case scenario, study material and the objectives are sent to students prior to the session through D2L
- It can be covered in 1-2 sessions (according to the weight of the topic)

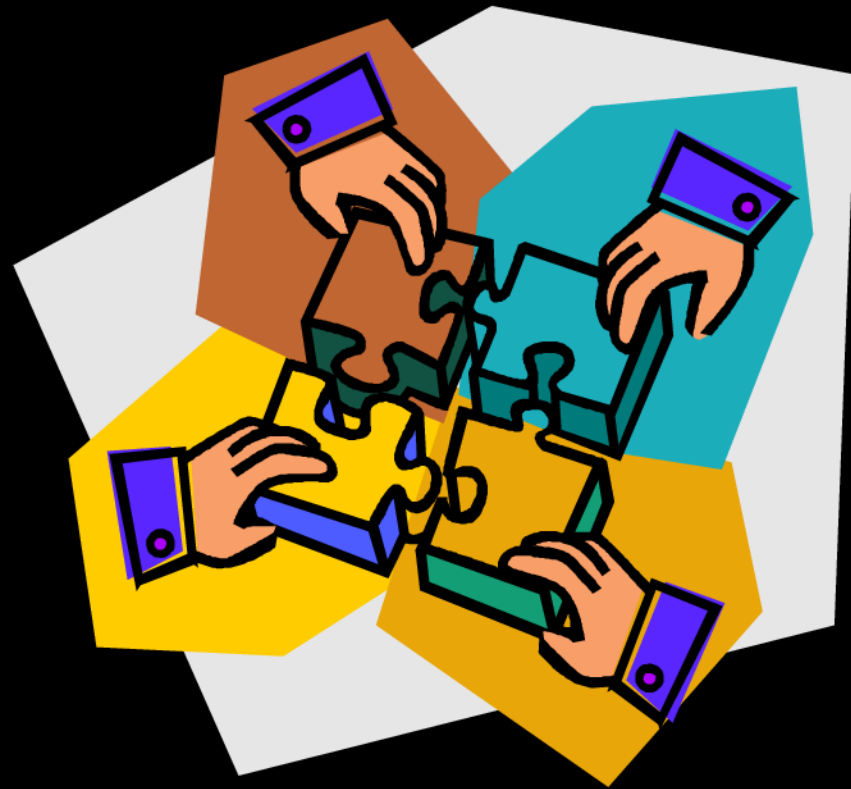
CBL

CBL CONT.

- Open discussion will be done in the last 15 minutes of the session
- Or online quizzes through D2L are given to students to ensure the fulfillment of all objectives



Problem Based Learning



C) PROBLEM BASED LEARNING (PBL) (5%)

- Problem-based learning is an exciting alternative to traditional classroom learning
- It is more interesting and ensure proper integration between all subjects
- In PBL, the faculty acts as facilitator and mentor rather than a source of solutions



PBL CONT.

- The scenario of the PBL should not be given to students prior to the session
- The scenario is prepared by the module coordinator and tailored by all faculty to meet their subject objectives and requirements



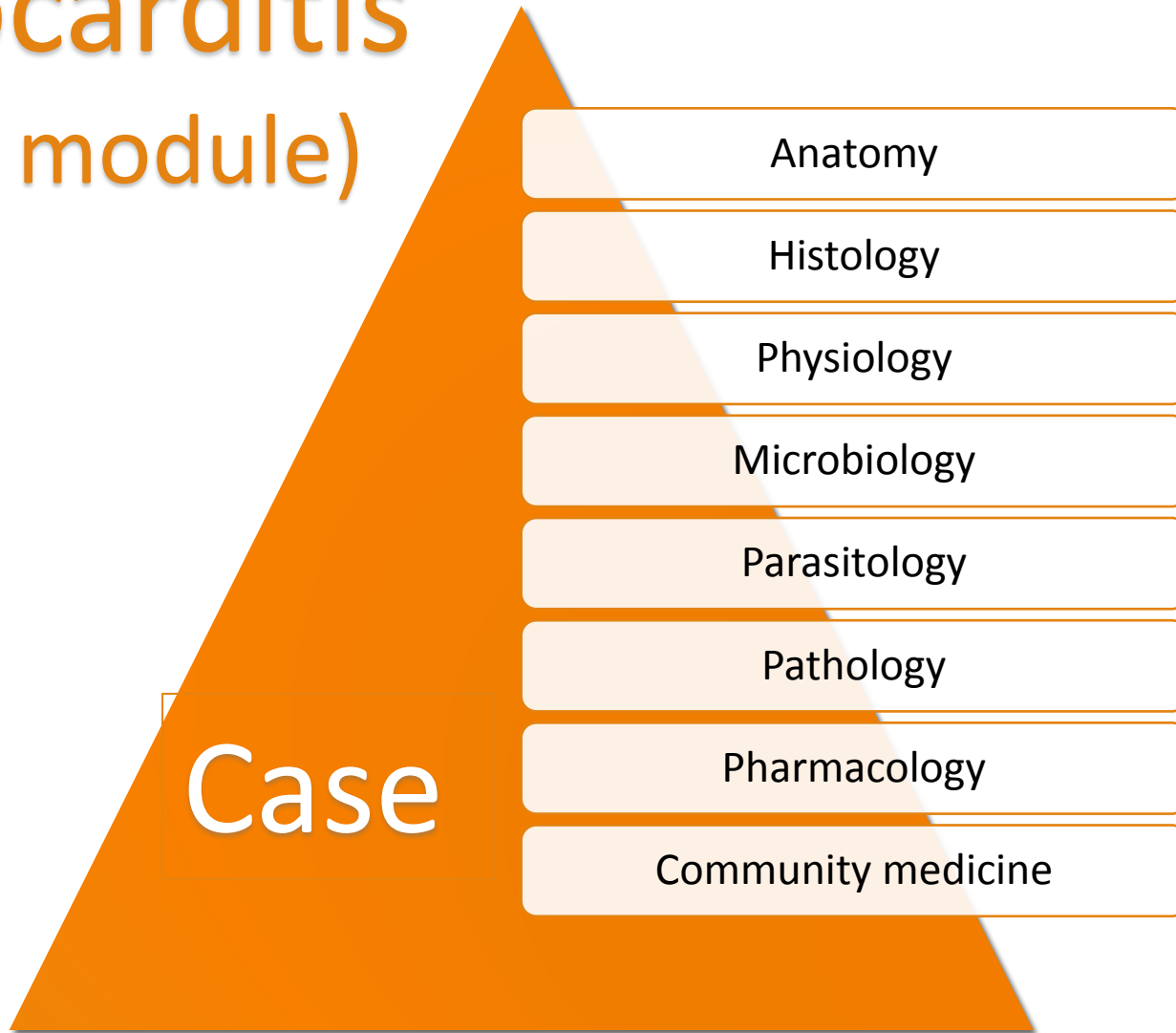
TIME LINE FOR PBL

Brain storming session

Break

Discussion session

Myocarditis (CVS module)



PBL CONT.

- Students are divided into groups (8-10/each)
- Teaching assistants act as facilitators
- Each group should select a leader to ensure an organized discussion



PBL CONT.

- In the second session , all students should highlight the objectives of each subject
- They should discuss the problem statement and list its significant parts
- They should develop, analyze and write out, the problem statement in their own words



D) SELF DIRECTED LEARNING

SDL

self-directed learning



SELF –DIRECTED LEARNING (SDL) (10%)

- The objectives of the topic should be sent to the students before the session (D2L)
- The students will be asked to read alone or in groups (4-5 students/each) in the library or in the class room using study materials (lectures notes or recommended text books)
- Open Discussion will be held between students and faculty in the last 15 minutes of the class



SDL CONT.

Or online quizzes will be solved by students at the end of the session to make sure of every student participation



E) COMPUTER ASSISTED SELF LEARNING (CASL /CBSL)



COMPUTER ASSISTED SELF LEARNING (CASL) (5%)

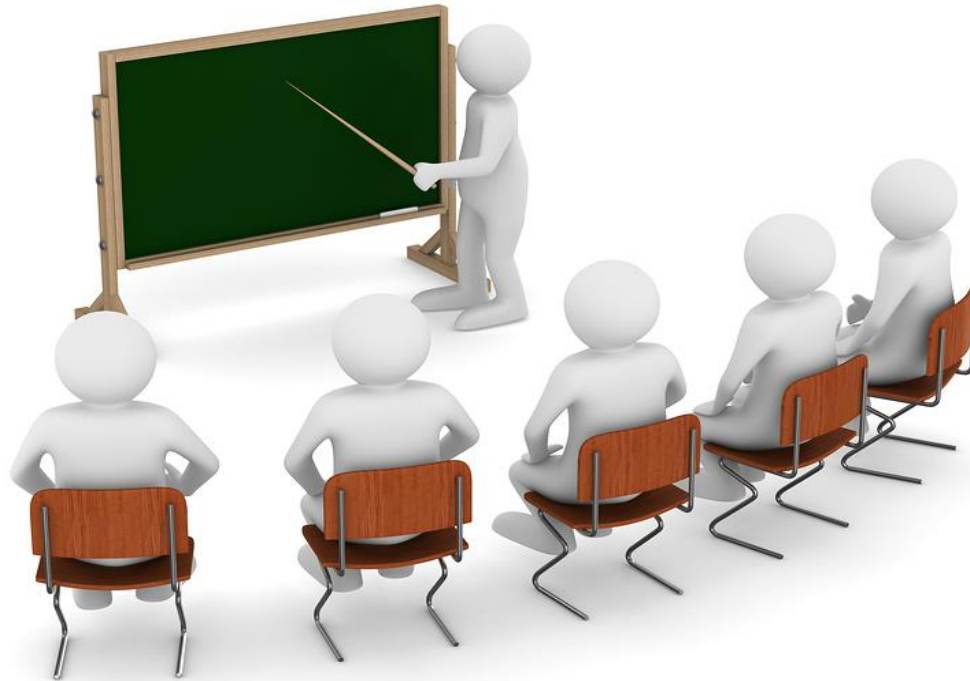
- The lectures will be prepared using the software (Articulate story line)
- The lecture will be sent to students through D2L & they will be asked to use their laptops or iPads and read the lecture
- An online post-test will be done (D2L) at the end of the session to ensure the fulfillment of the objectives of the topic



2) LARGE GROUP TEACHING



TEACHER -CENTERED EDUCATION



Lectures

Practical sessions

Lectures

Traditional lectures: (10%)

Scenario based interactive lectures (SBIL)
(30%)

A) TRADITIONAL LECTURES (10%)

- Traditional education practices, tend to produce students who are often bored with their education
- They are faced with a vast amount of information to memorize
- Traditional classrooms also do not prepare students to work with others in collaborative team situations
- And the final grade becomes the overriding concern rather than learning



I study
↓
I take the test
↓
I pass it
↓
I forget what I learnt



B) SCENARIO BASED INTERACTIVE LECTURES (SBIL) (30%)

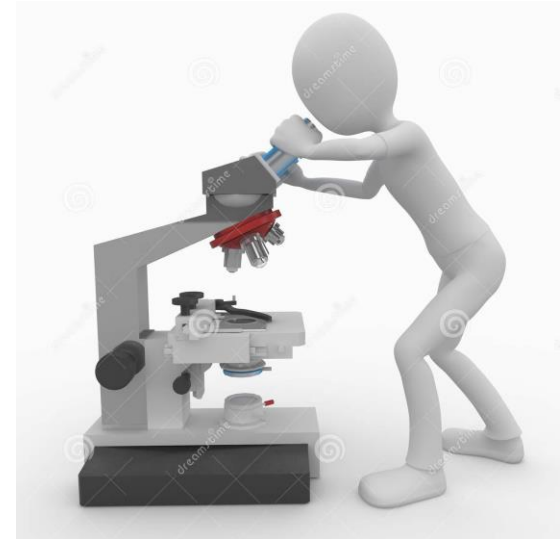
- A case scenario consistent with topic is presented by the faculty at the beginning of the lecture
- The case is analyzed in the classroom through the discussion, then the topic is delivered in a traditional way
- At the end of the session, students will be asked to answer the questions given through response clickers



PRACTICAL SESSIONS(30%)

Usually it is covered in one or two hours in separate groups

1. Pre-laboratory
2. Microscopic identification of different types of parasites
3. Macroscopic identification of different types of parasites
4. Case discussion



PRACTICAL SESSIONS

- Chalk and talk
- Computer based



STUDENTS' PERCEPTION TO ALL TEACHING METHODS

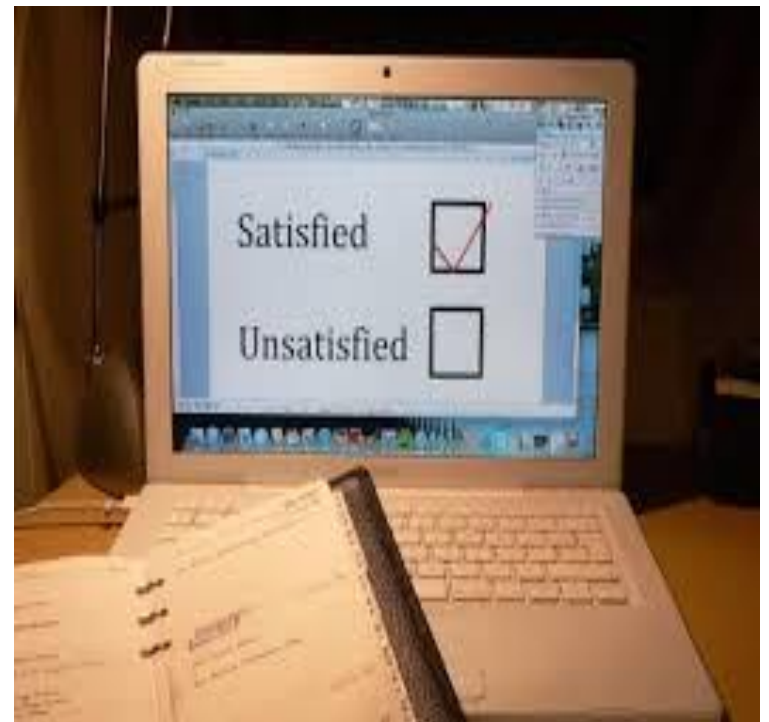


SurveyMonkey[®]

STUDENTS' SATISFACTION

Students' satisfaction was evaluated through computer software where they rated their satisfaction from different teaching methods on a 5 point scale with:

- (1) as “Strongly unsatisfied”
- (5) as “Strongly satisfied”





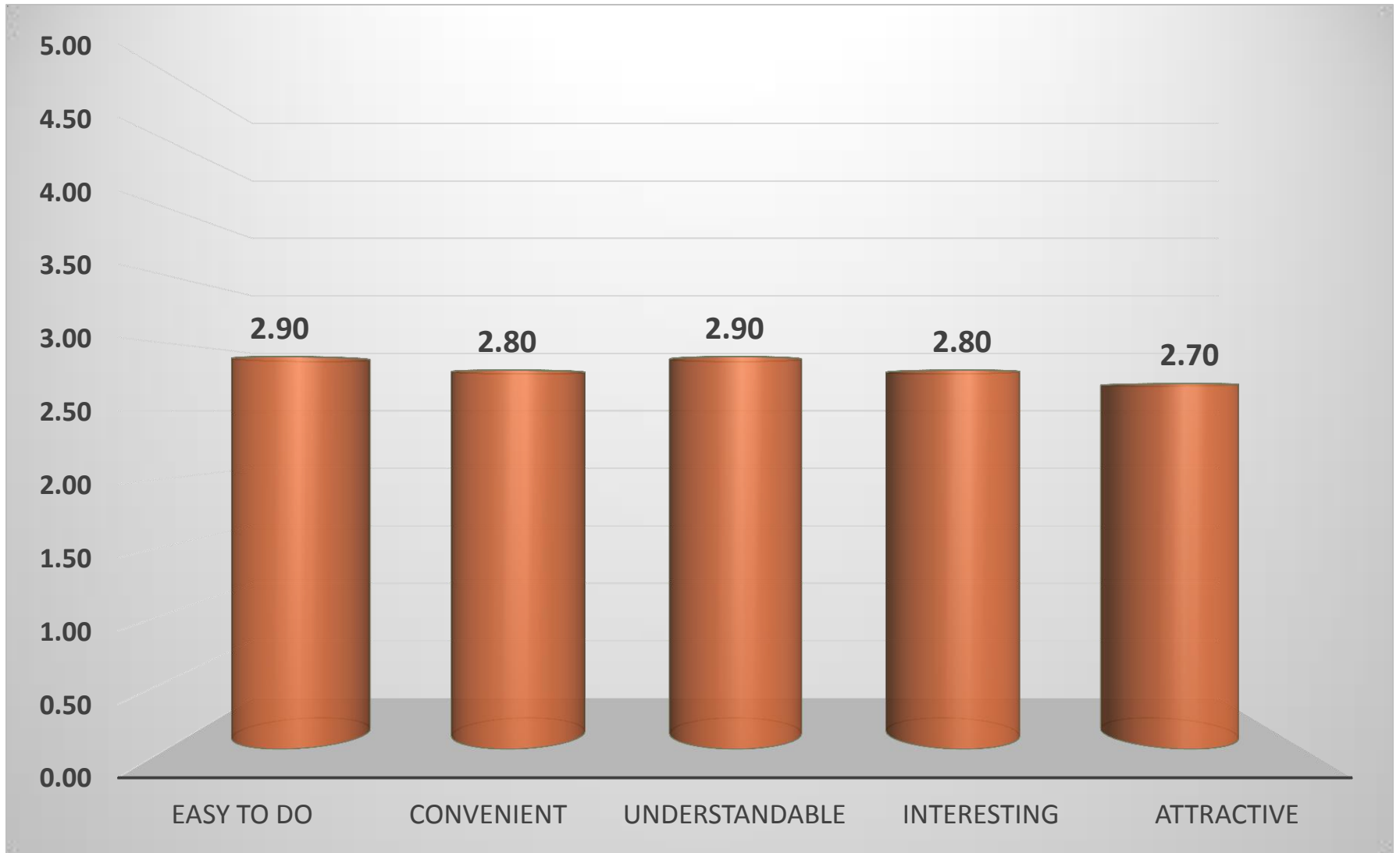
Theory



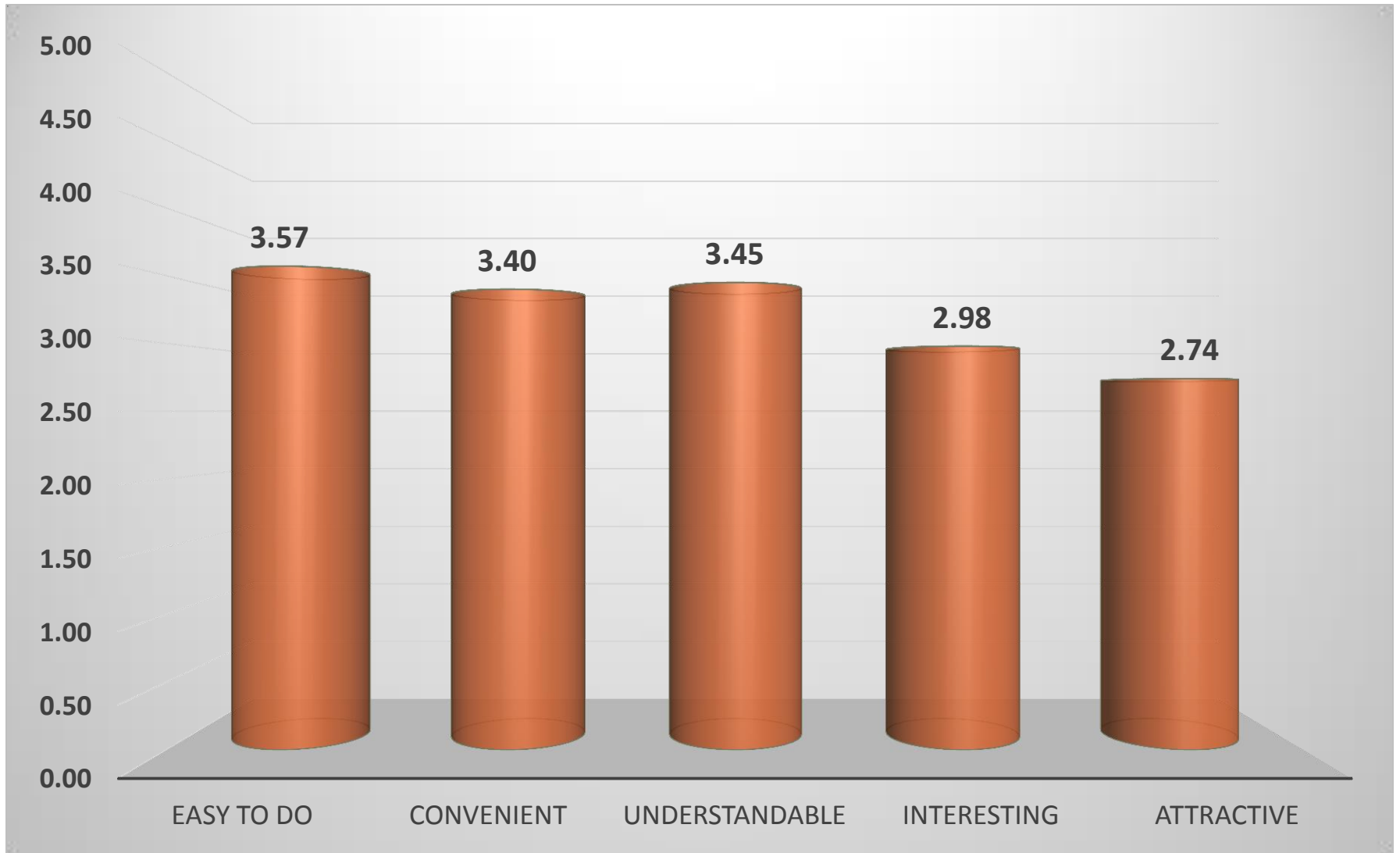
small
groups

The logo consists of the word 'small' in a light green, lowercase, sans-serif font, positioned above the word 'groups' in a dark teal, lowercase, bold, sans-serif font. To the right of the text are two speech bubble icons: a smaller one in light green and a larger one in dark teal, both with a tail pointing towards the bottom right.

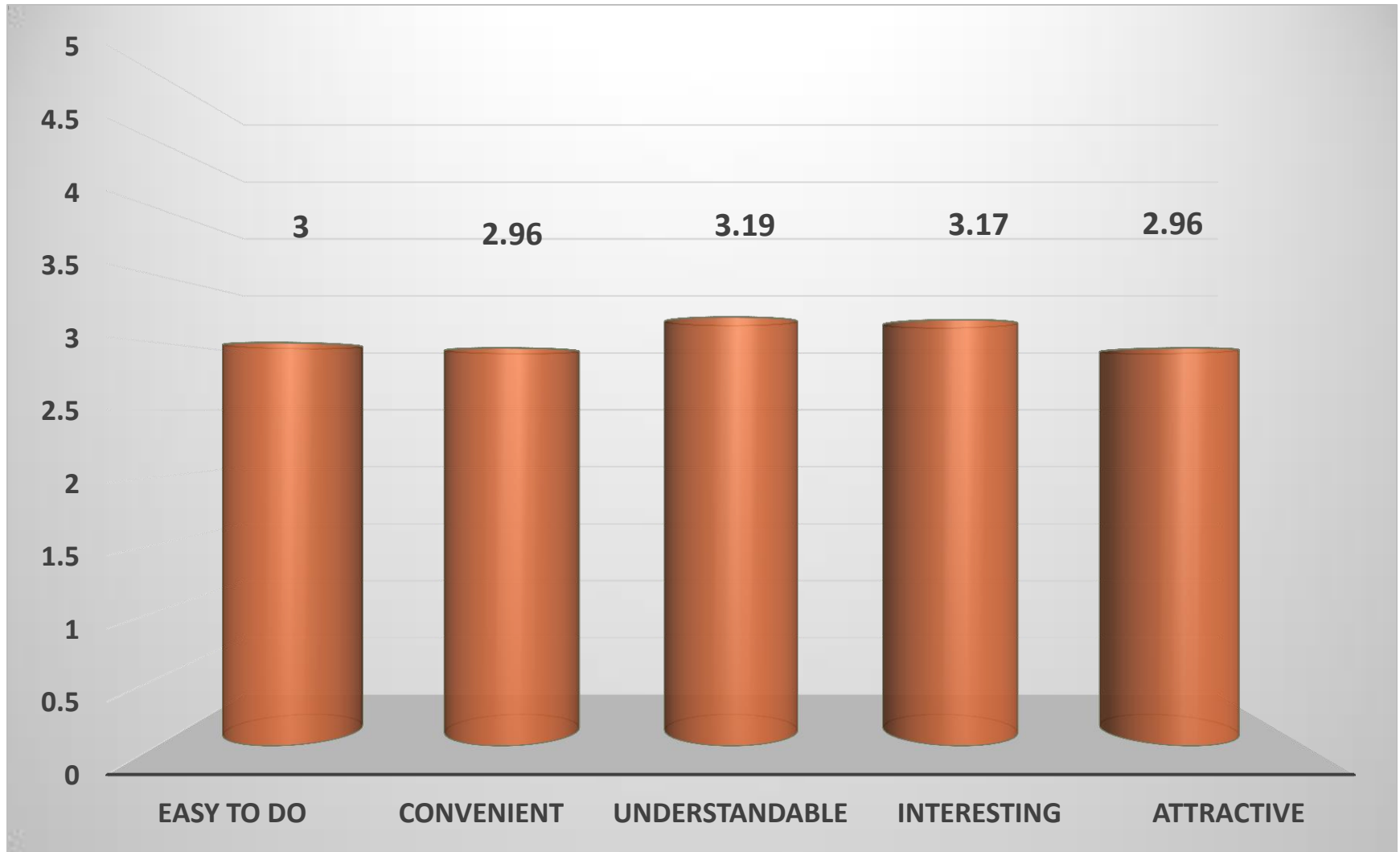
STUDENTS' SATISFACTION SGD



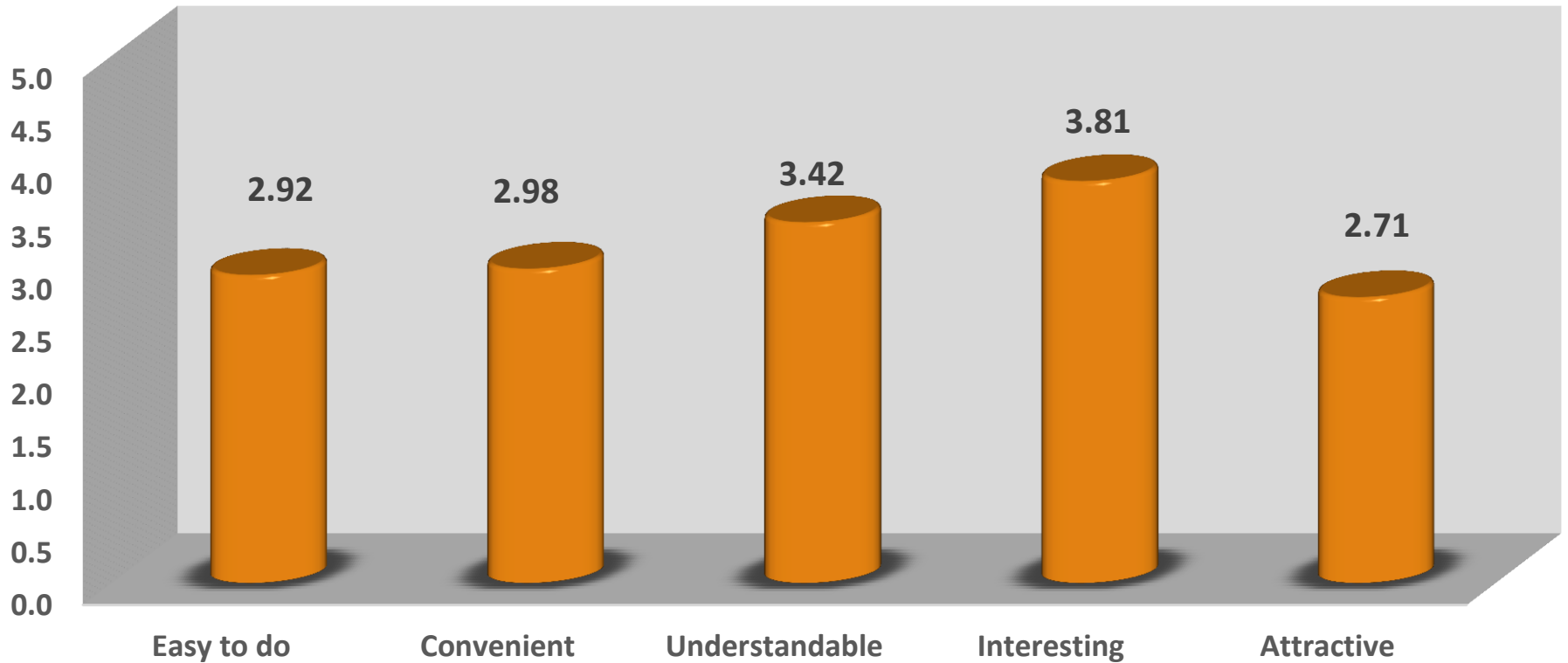
STUDENTS' SATISFACTION CBL



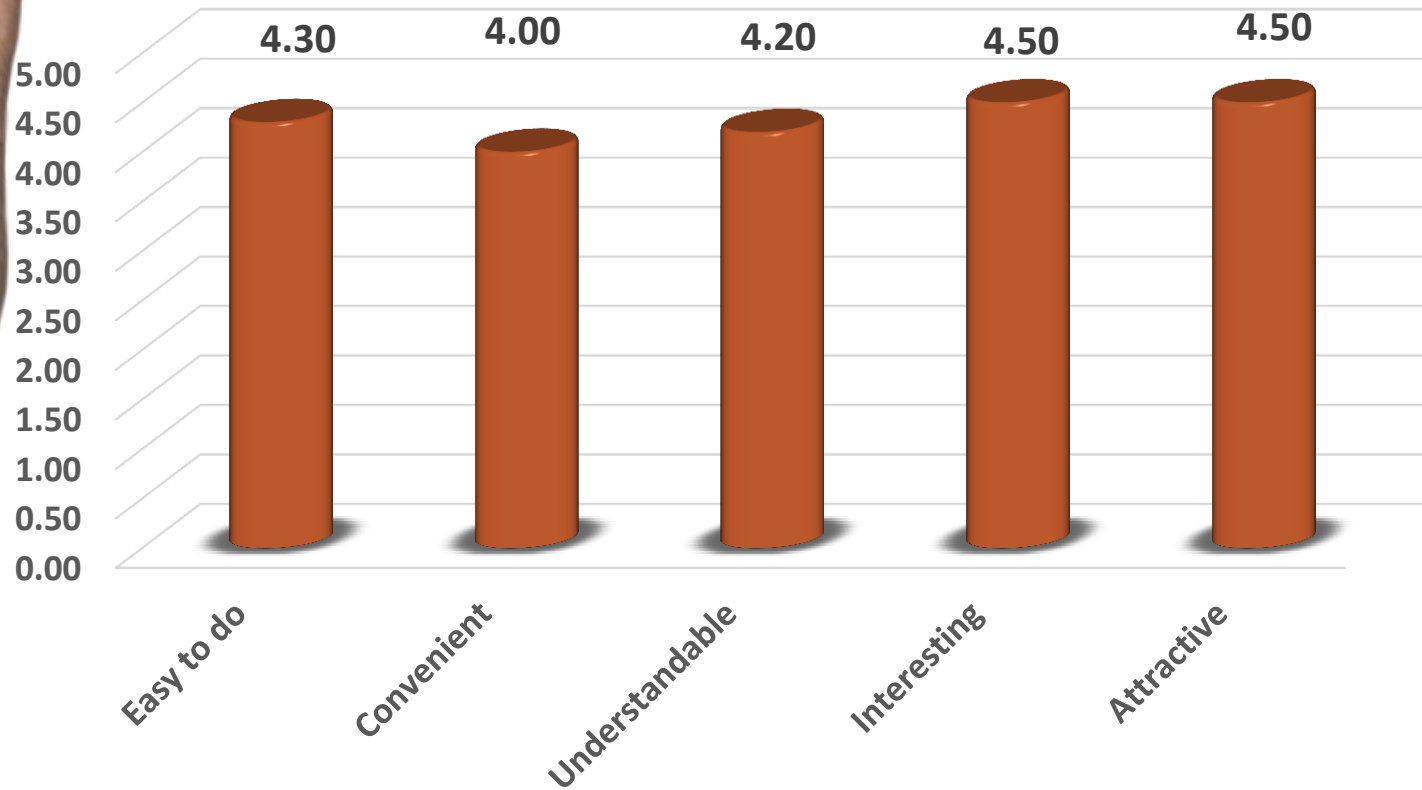
STUDENTS' SATISFACTION PBL

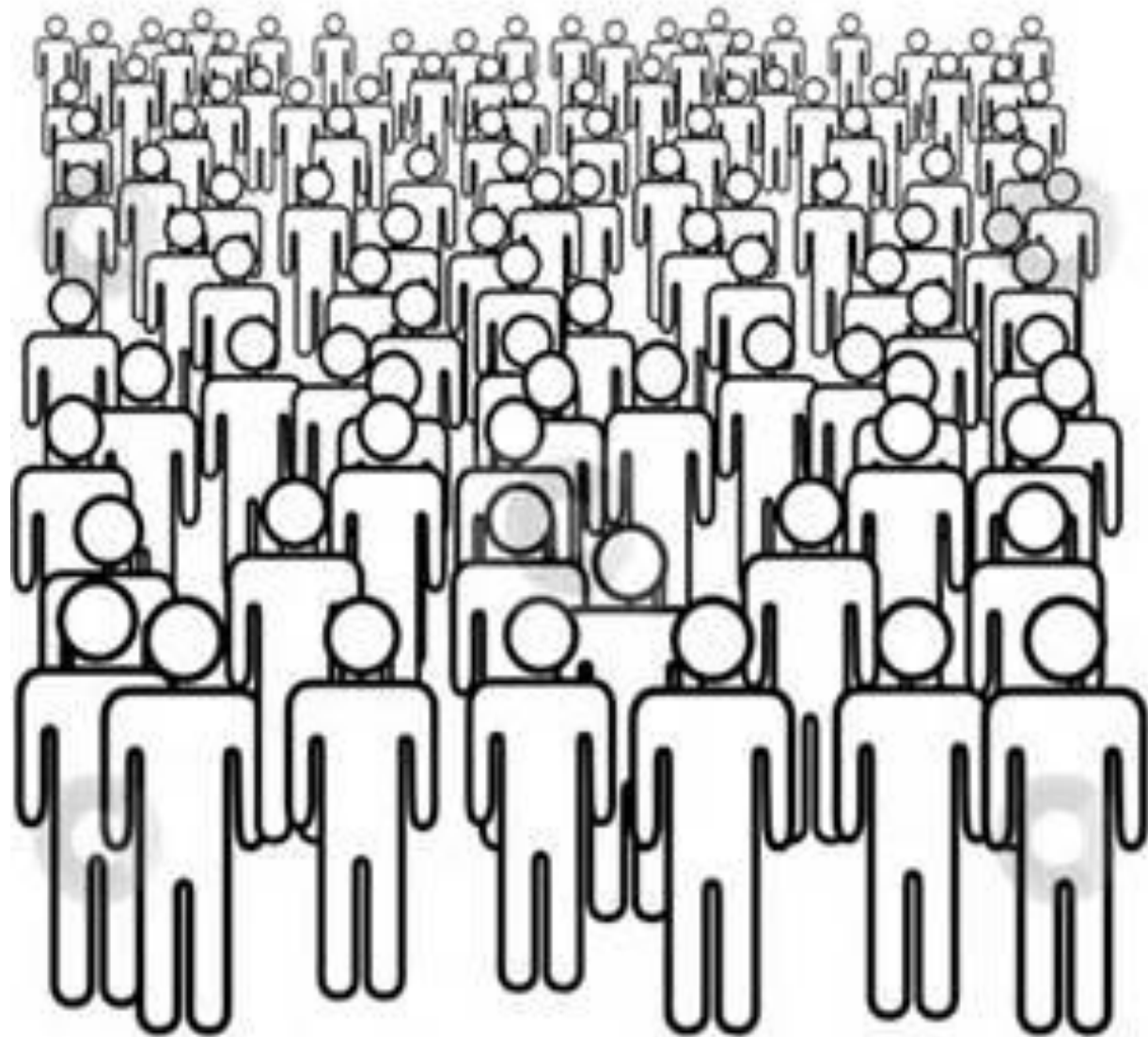


STUDENTS' SATISFACTION SDL

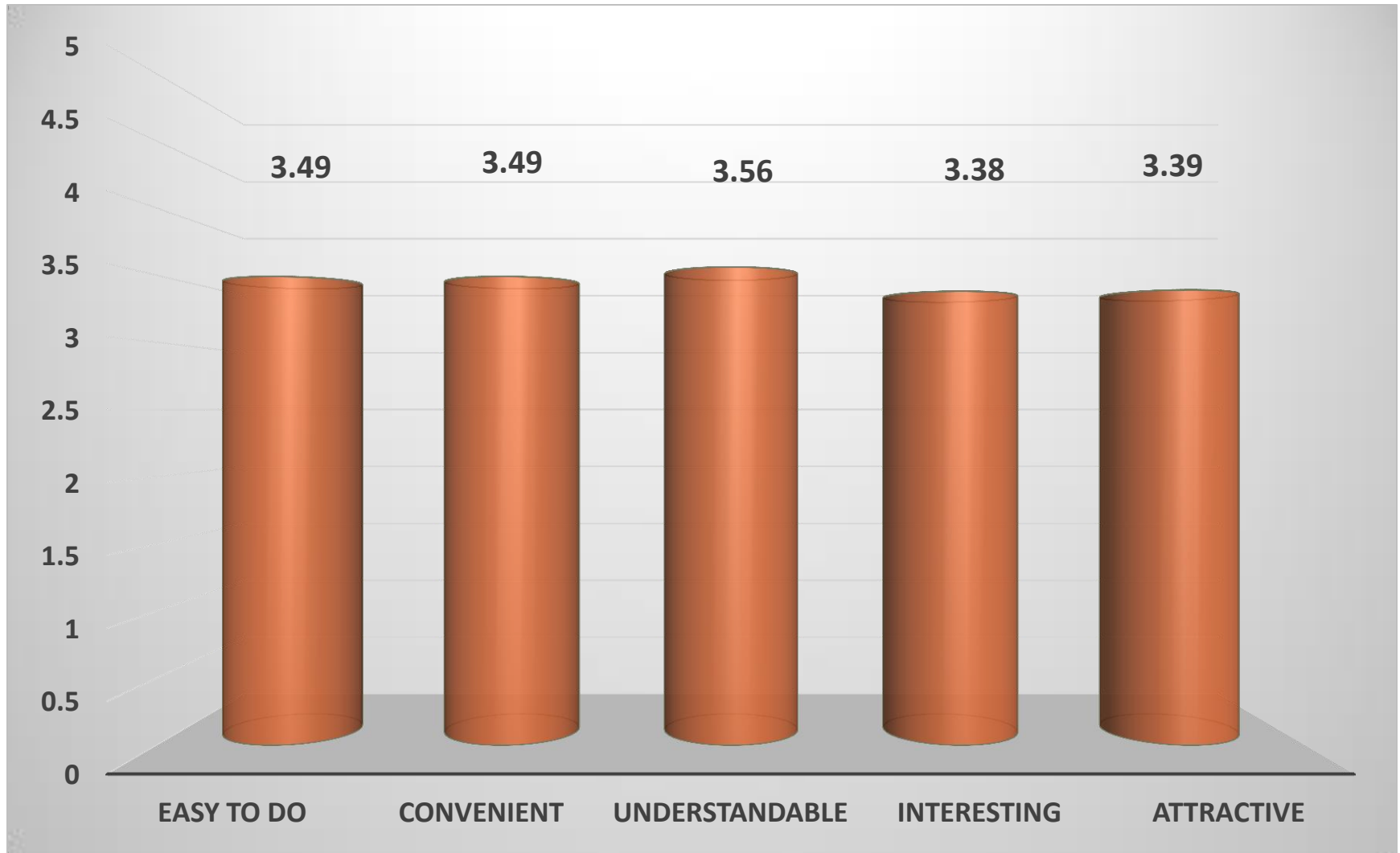


STUDENTS' SATISFACTION CASL/CBSL

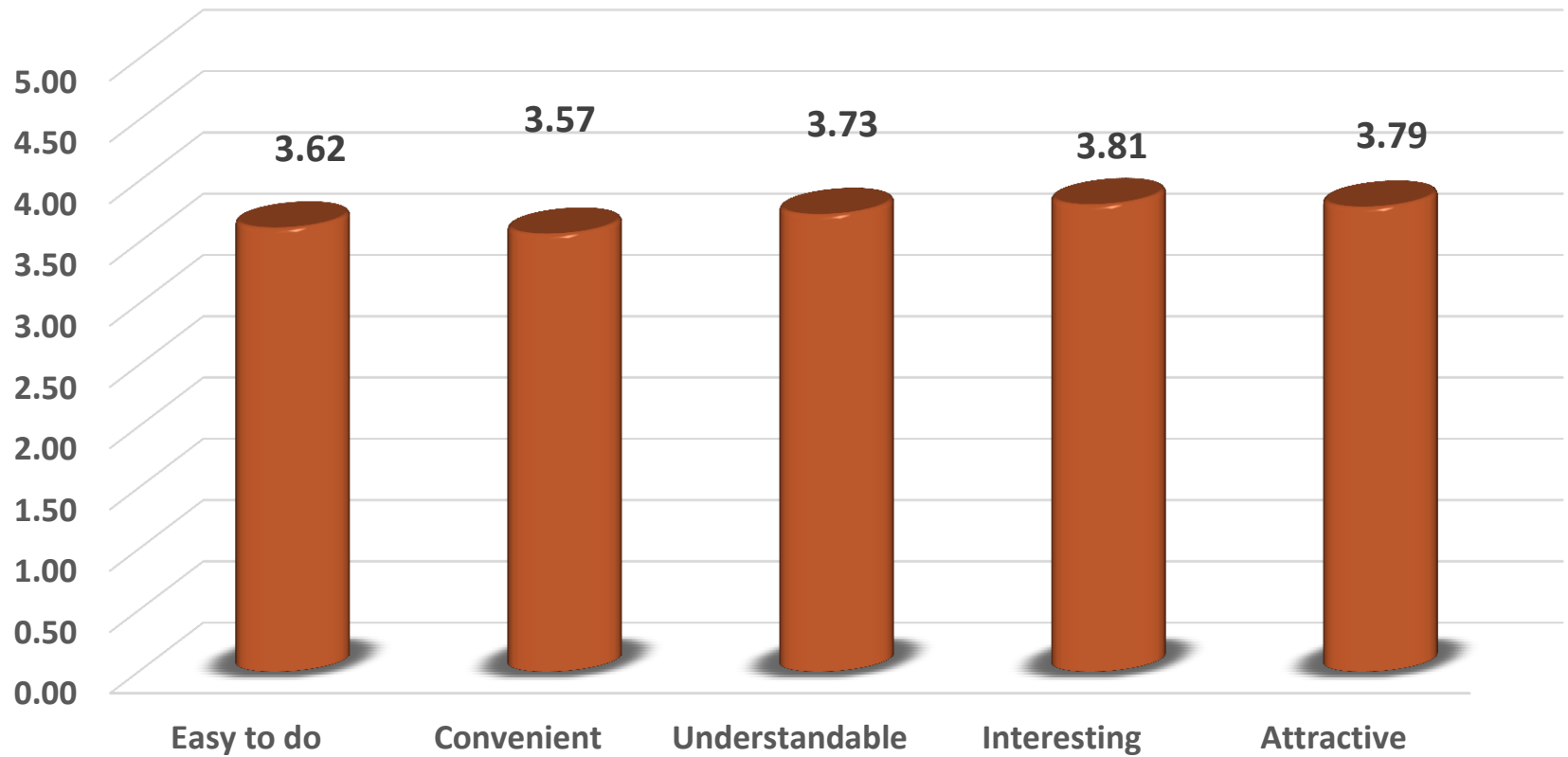




STUDENTS' SATISFACTION TRADITIONAL LECTURES

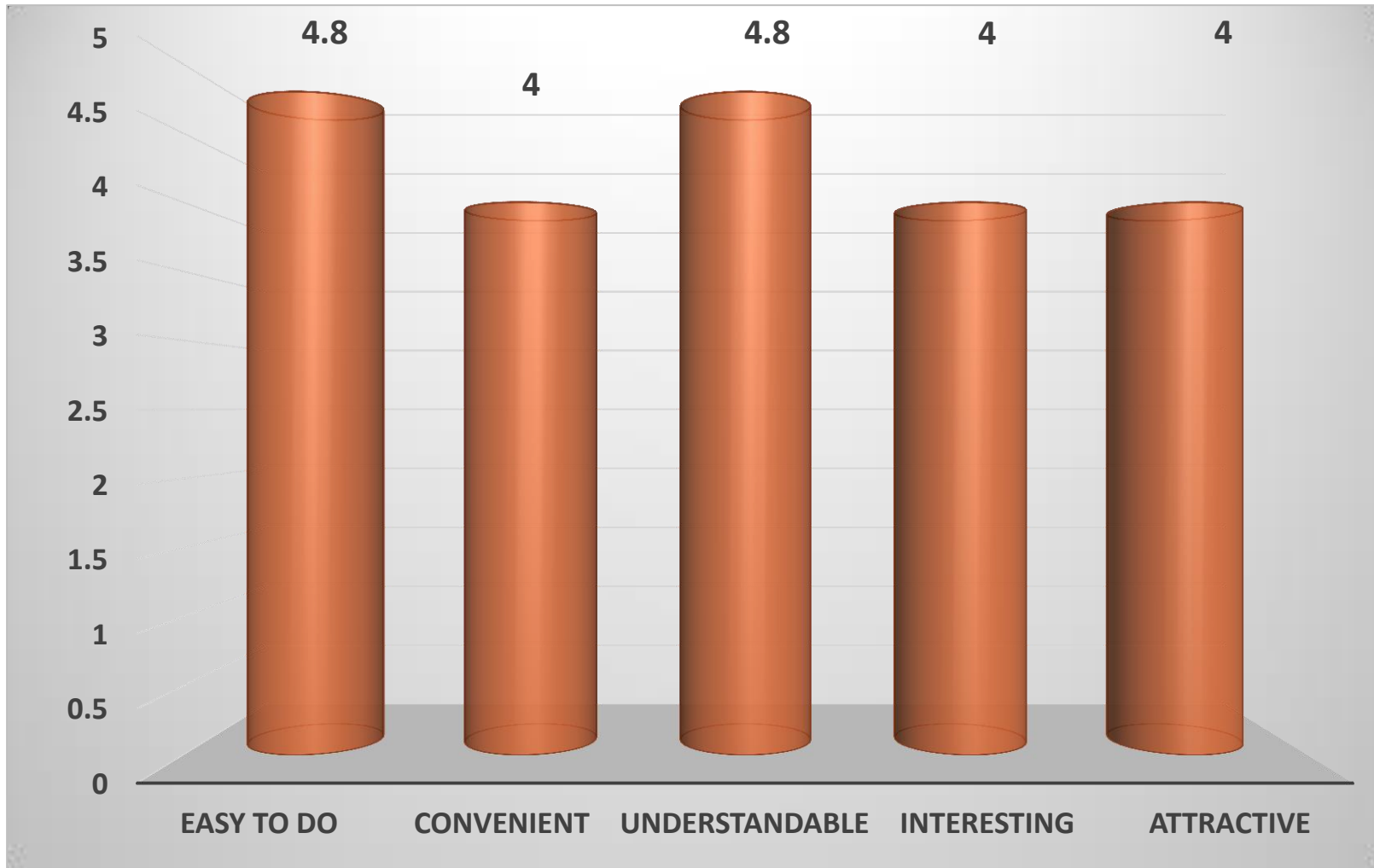


STUDENTS' SATISFACTION SBIL

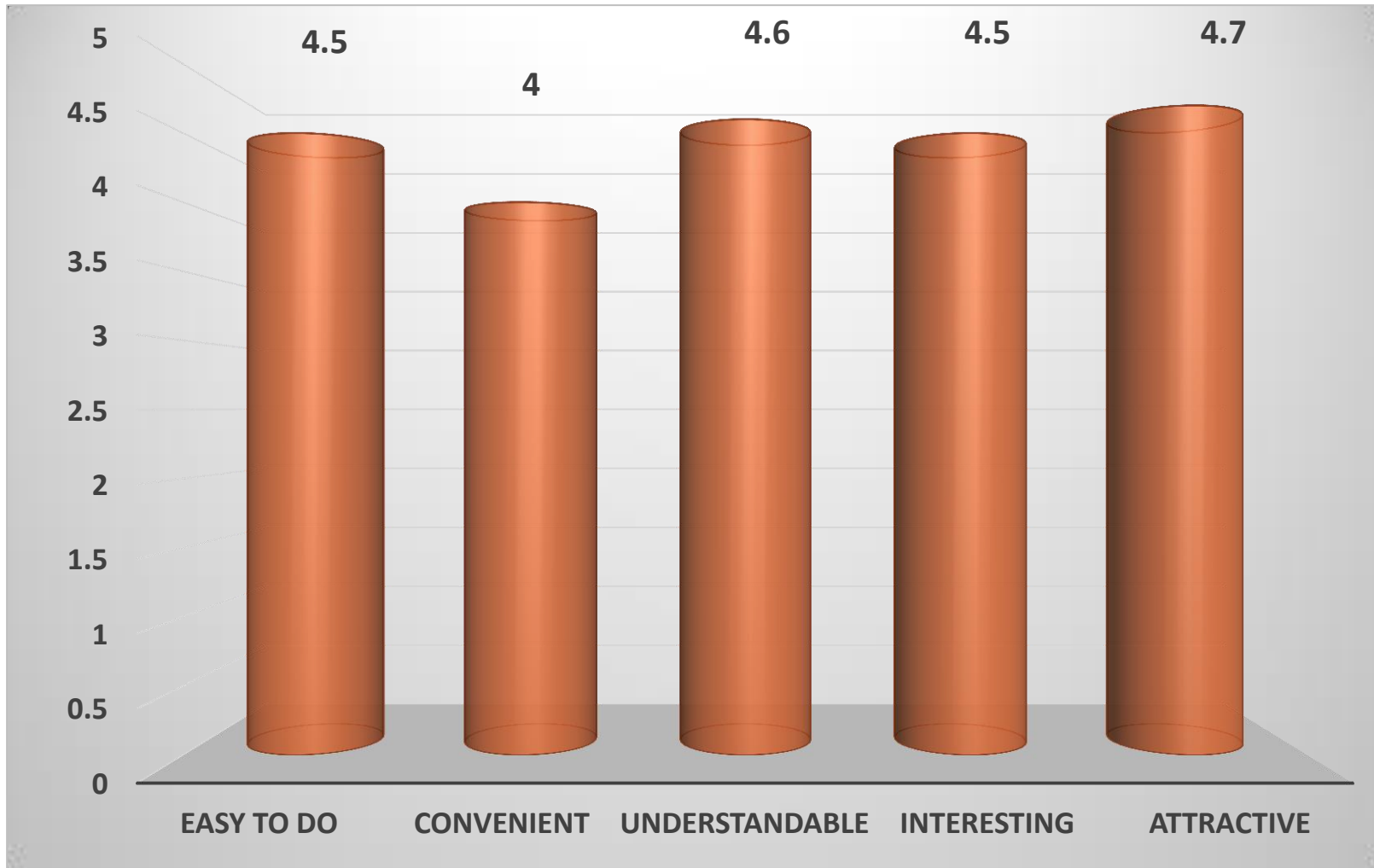


practical

STUDENTS' SATISFACTION TRPL



STUDENTS' SATISFACTION CBPL



Maybe we need to try
something new...



FOCUSED STUDY





ASSESSMENT OF COMPUTER BASED LEARNING IN TEACHING PARASITOLOGY



Aim of the study

AIM OF THE STUDY

To:

1. assess the impact of using a **CASL** in teaching on students' performance
2. and to compare it to teaching the same topics through the **SBIL**



THEORY

High

Satisfaction rate

CASL

SBIL



AIM OF THE STUDY

To:

1. assess the impact of using a **CBPL** in teaching on students' performance
1. and to compare it to teaching the same topics through the **TRPL**



A hand is shown from the left, holding a large, rounded, brown rectangular sign. The sign has the word "Methods" written in white, bold, sans-serif font in the center. The background is white with a light gray horizontal band on the right side. A thin black horizontal line is visible behind the sign. At the bottom of the image, there is a solid brown horizontal bar.

Methods

METHODS

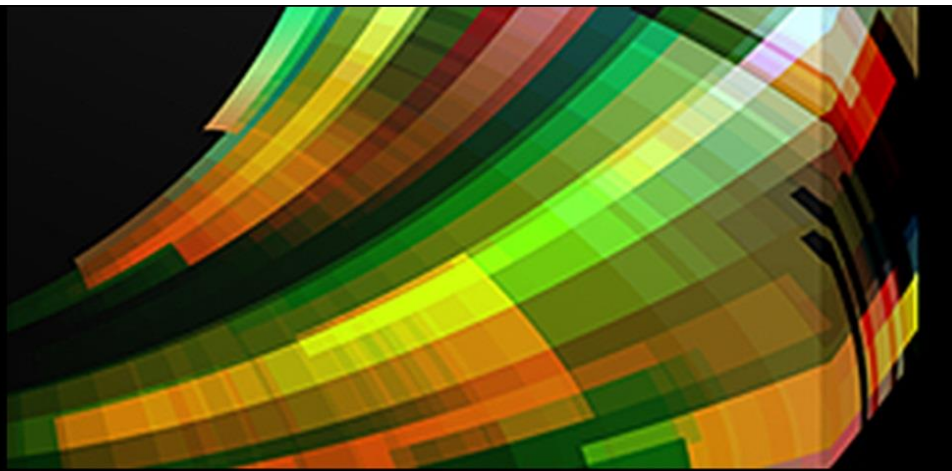
A single batch of Second Year Medical students in Dubai Medical College was randomly divided into two groups in both lectures and practical sessions



METHODS CONT. (LECTURES)



COMPUTER ASSISTED SELF LEARNING (CBSL)

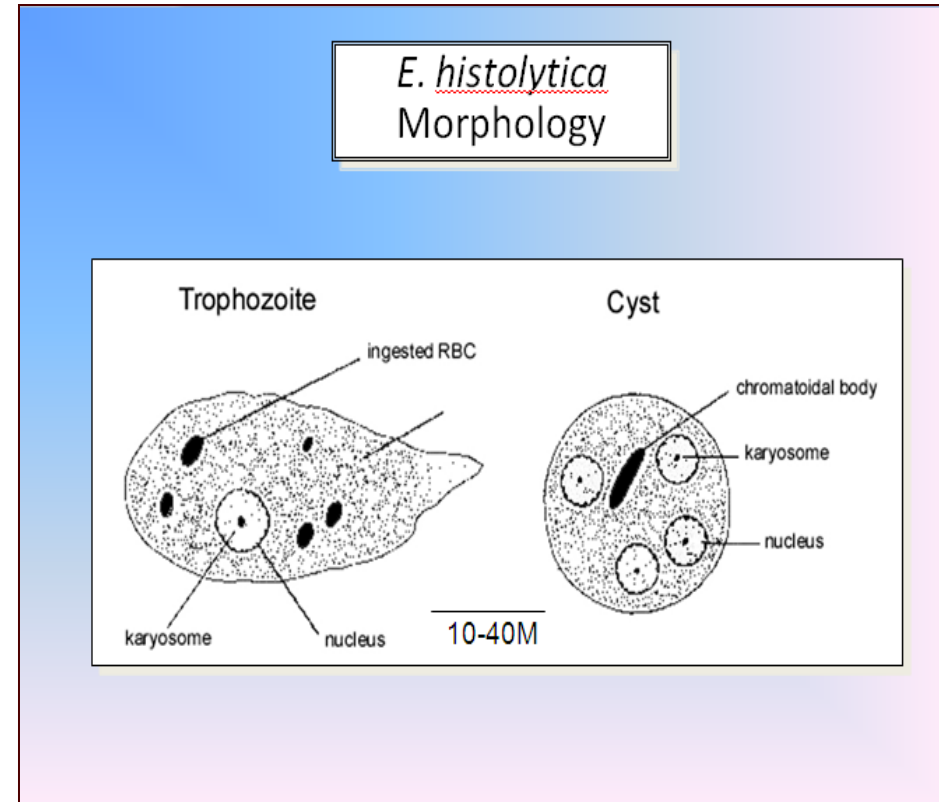


articulāte[®]
STORYLINE

Amebiasis I

A digital illustration of a female presenter with short, wavy brown hair, wearing a dark grey business suit with a green top. She is standing on the left side of a white presentation screen, holding a yellow pointer stick and pointing towards the center of the screen. The screen displays a microscopic image of a cell, likely a trophozoite of Entamoeba histolytica, characterized by its large size, multiple nuclei, and a distinct nucleus with a prominent karyosome. The background of the slide is a light blue and white, suggesting a laboratory or educational setting.

SCENARIO BASED INTERACTIVE LEARNING (SBIL)



PRACTICAL SESSIONS



**Computer
software
Pre-Lab.**



**Traditional
Pre-lab.**

PRACTICAL SESSIONS (Cont.)

- We used Anofel 4 computer based learning program



PRE-TEST

Prior to the start of each session, a pre-test of five multiple choice questions was given to both groups to assess the students' baseline knowledge



POST-TEST

- A post test was done after completion of each session





D2L™

About



articulāte
QUIZMAKER '09

V3.3.1103.112

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Quiz - 1st Semester - Preview

Time Limit: 0:45:00

Time Left: 0:44:00

Muhammed D.M.: Attempt 1

[Exit Preview](#)

Questions

1 of 40 questions saved

Page 1:

1



Page 2:

2

Quiz Status

Page 1 Saved

Quiz

[Previous Page](#)

[Next Page](#)

Page 2 of 40

Note: It is recommended that you save your response as you complete each question.

Question 2 (0.2 points)

Infectious stages may be transmitted from person to person in:

- Entrobium vermicularis.
- Fasciola hepatica.
- Ancylostoma duodenale.



Pre-test 3 Balantidiasis

Time Taken: 00:46 | Turned in Nov 25, 2013 9:59 AM

Graded | [Delete](#)

0/5

Total Points

1 2 3 4 5

Question Total: 1 point

Balantidium coli, all are true EXCEPT:

A has pigs as reservoir hosts

Answered

B can be transmitted from person to person

C is the largest flagellate

Correct Answer

D cyst has a kidney shaped nucleus

Pre-test 3 Balantidiasis

Quiz Options

[Quiz Overview](#) [All Submissions](#)

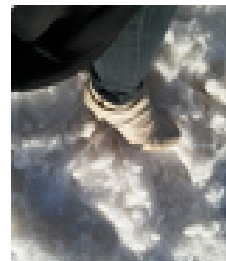
Assigned to: ■ [Para group Second Year Batch 27](#)

High Scores



[Asha Mohammad](#)

5/5



[Zaynab Gerashi](#)

5/5



[moniza hasnat](#)

5/5



[marwa lutfi](#)

5/5



[Waed Al Sumairi](#)

4/5

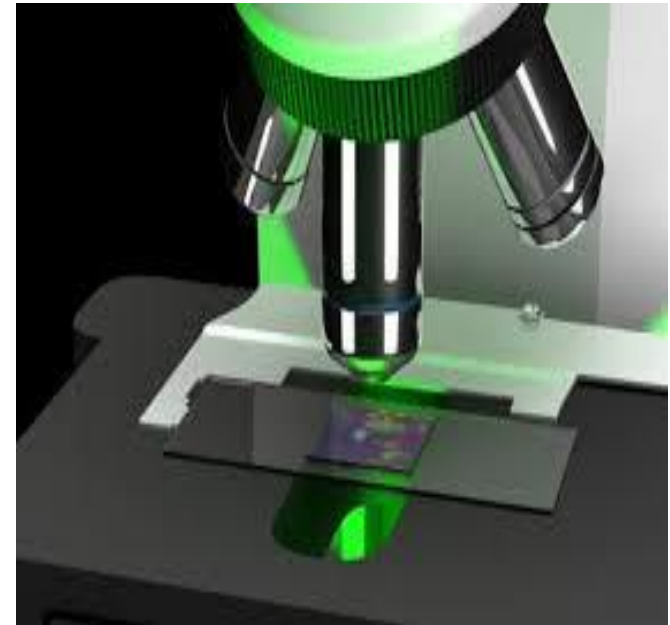
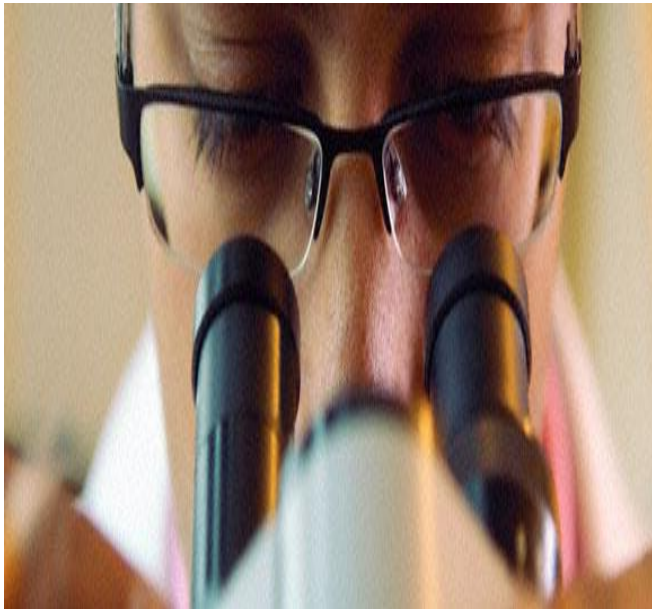


[Sara AlMarzooqi](#)

4/5

THE PRACTICAL SESSIONS

Identification of the slides after the practical sessions was also done



STATISTICAL ANALYSIS

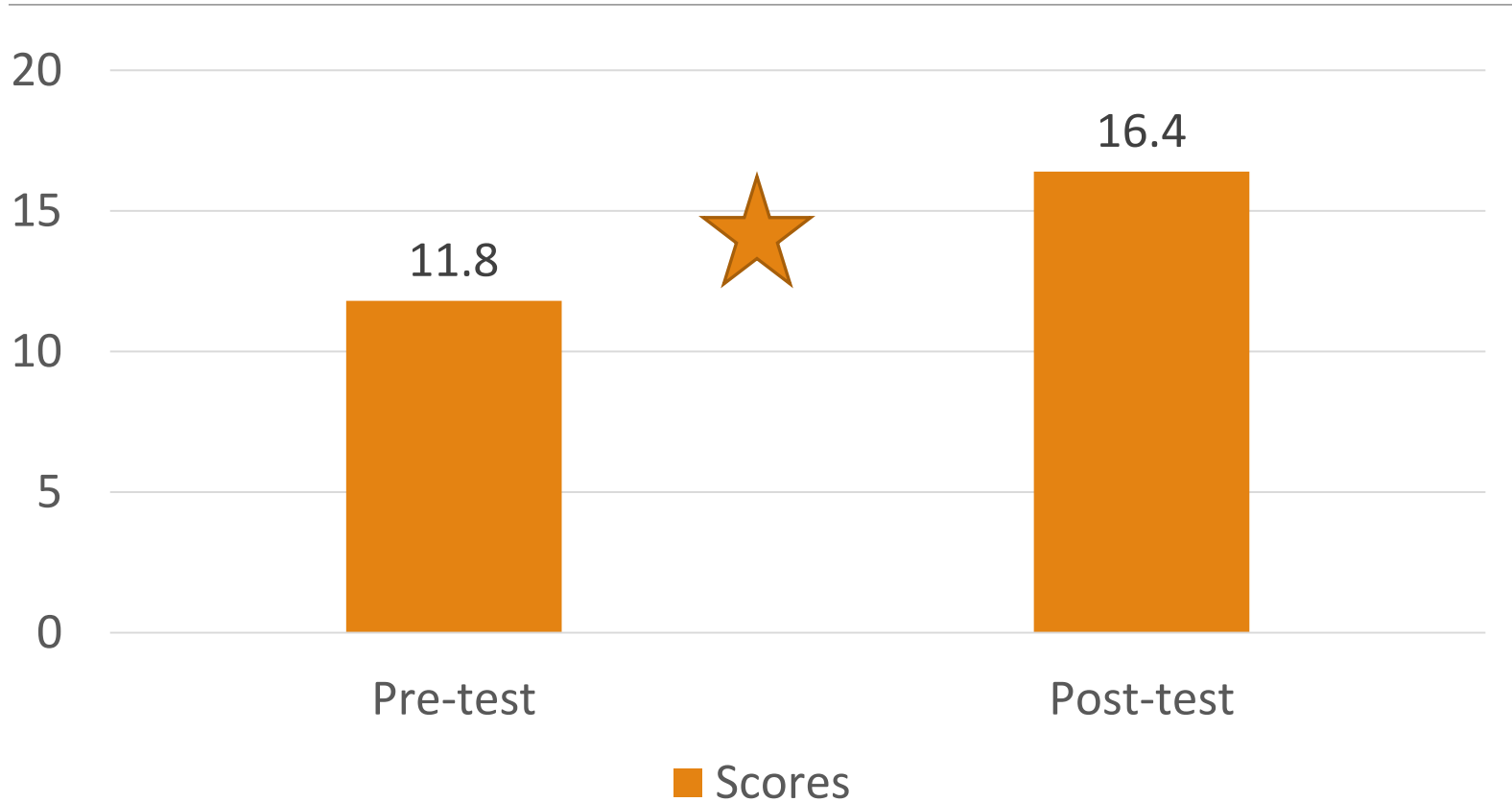
- Independent-sample t test was used to detect differences in the means between groups by using SPSS (17).



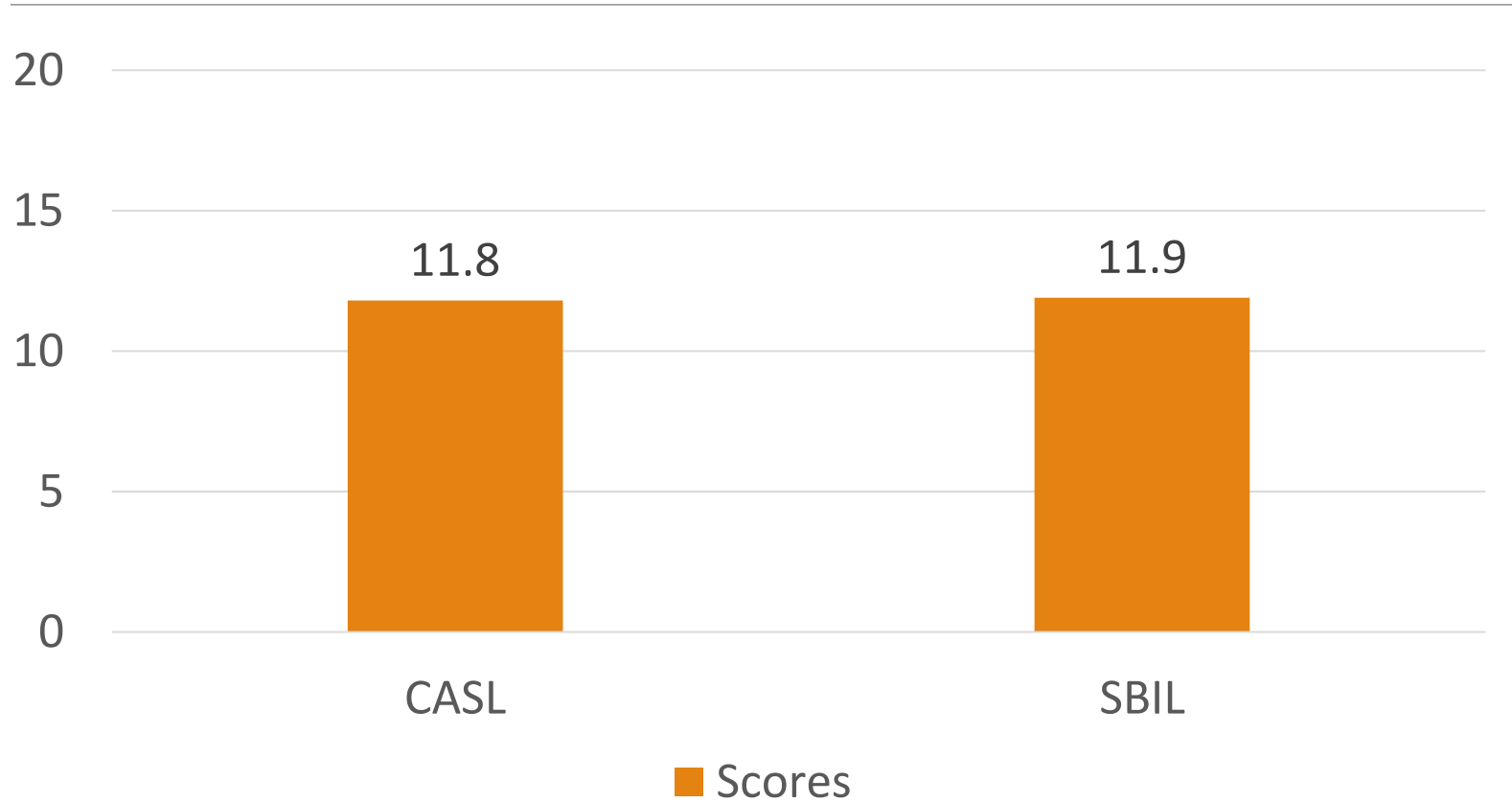
RESULTS



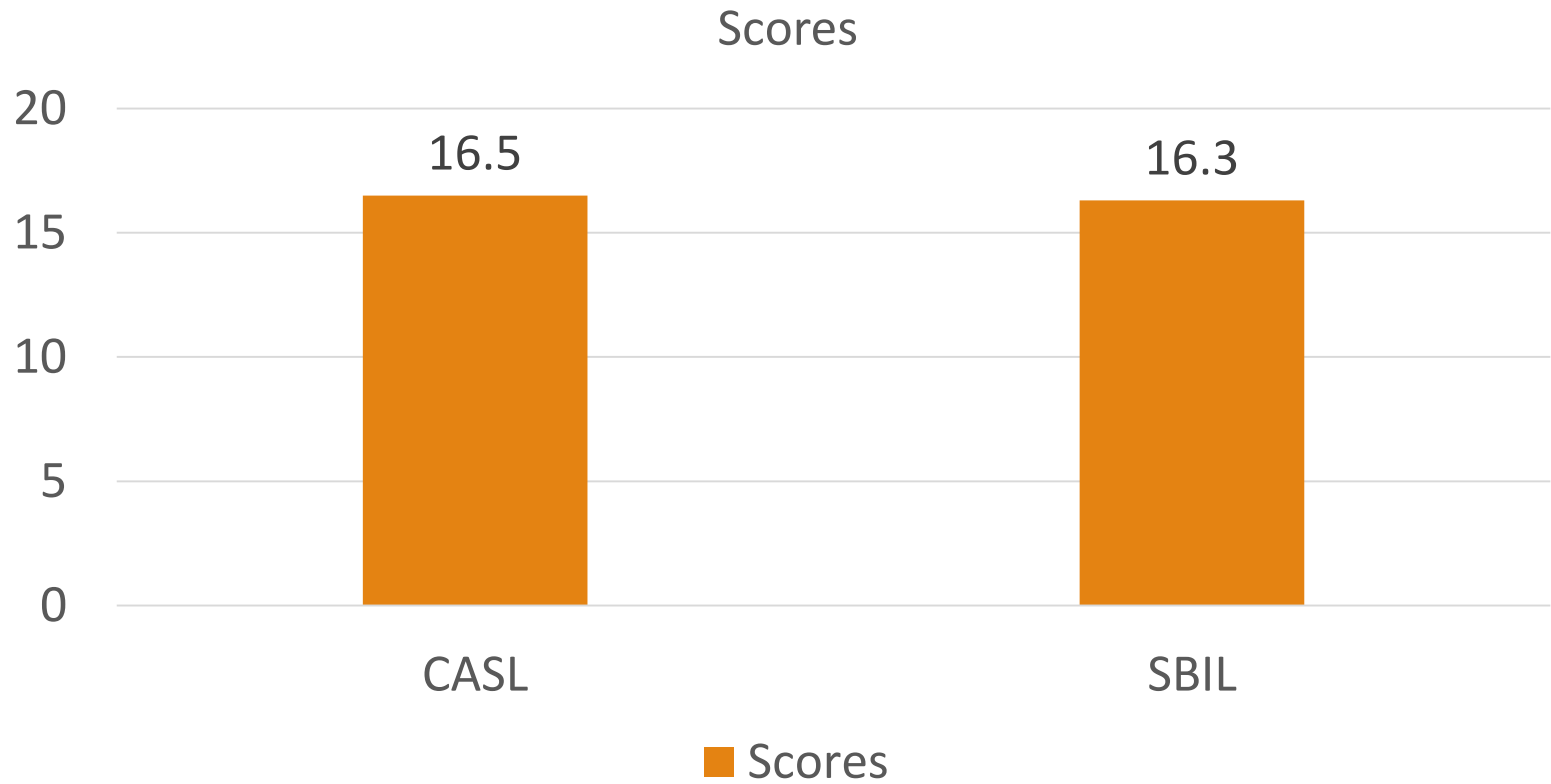
OVER ALL MEAN SCORES IN PRE-TEST AND POST-TEST



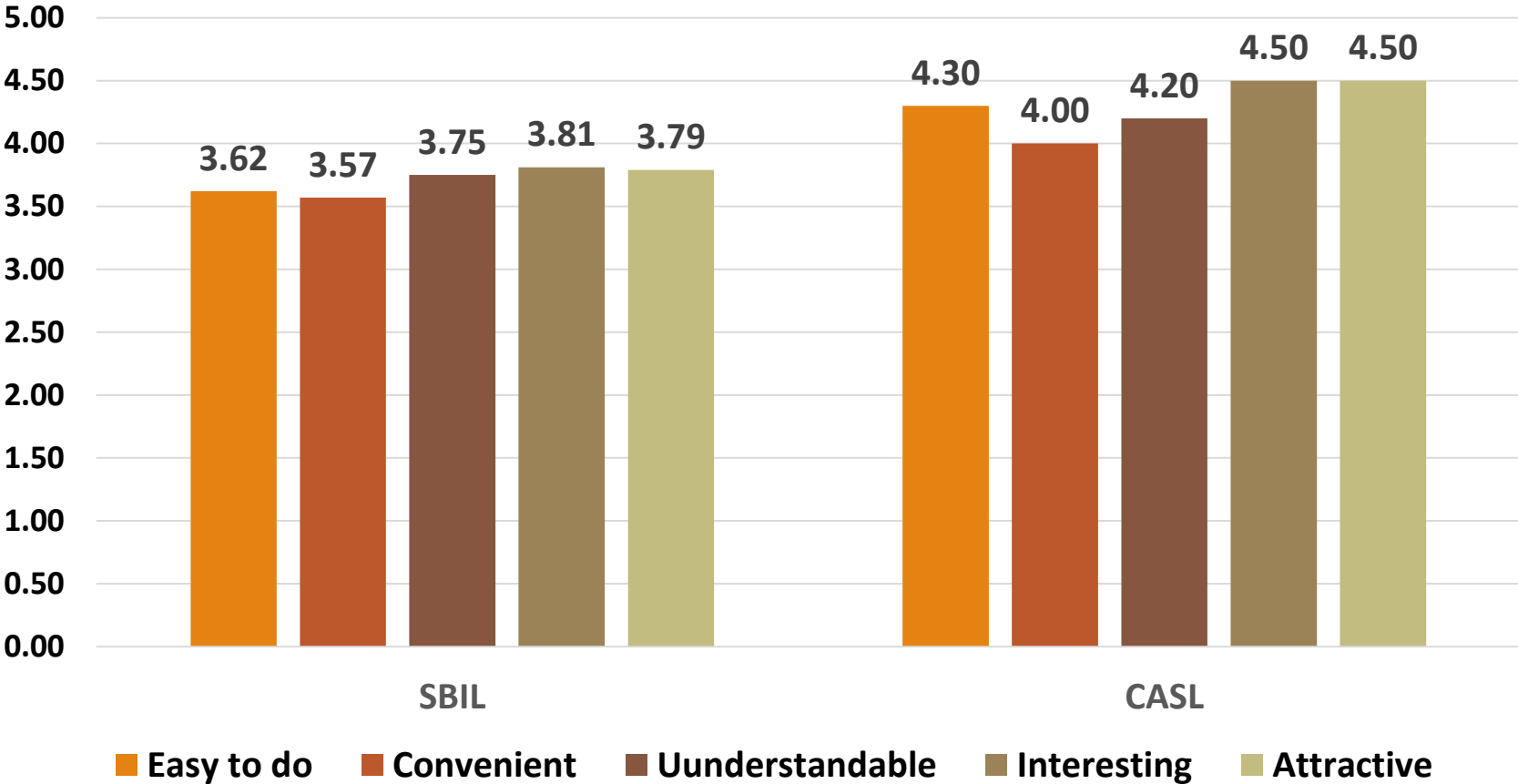
MEAN SCORES IN PRE-TEST



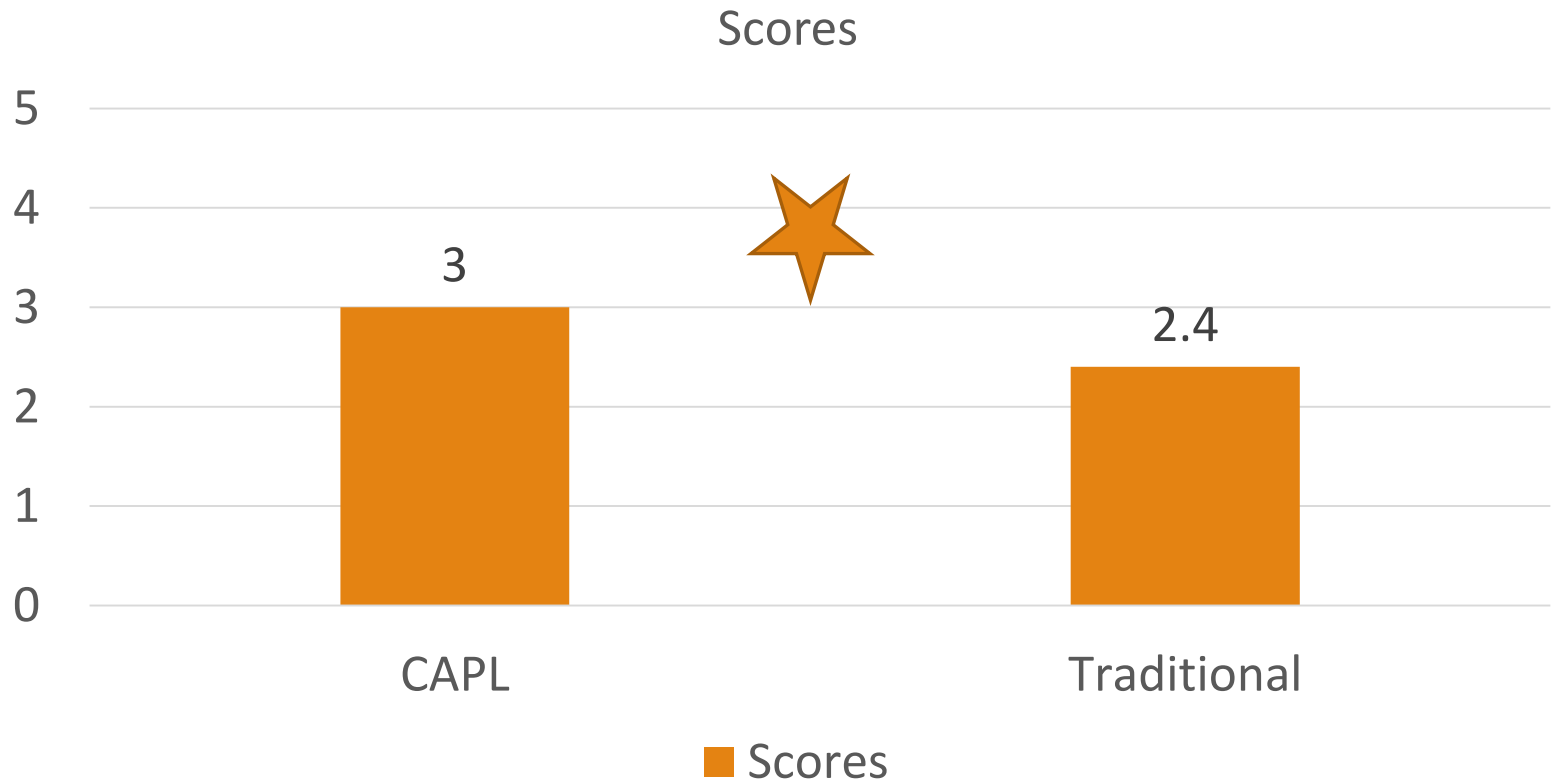
MEAN SCORES IN POST-TEST



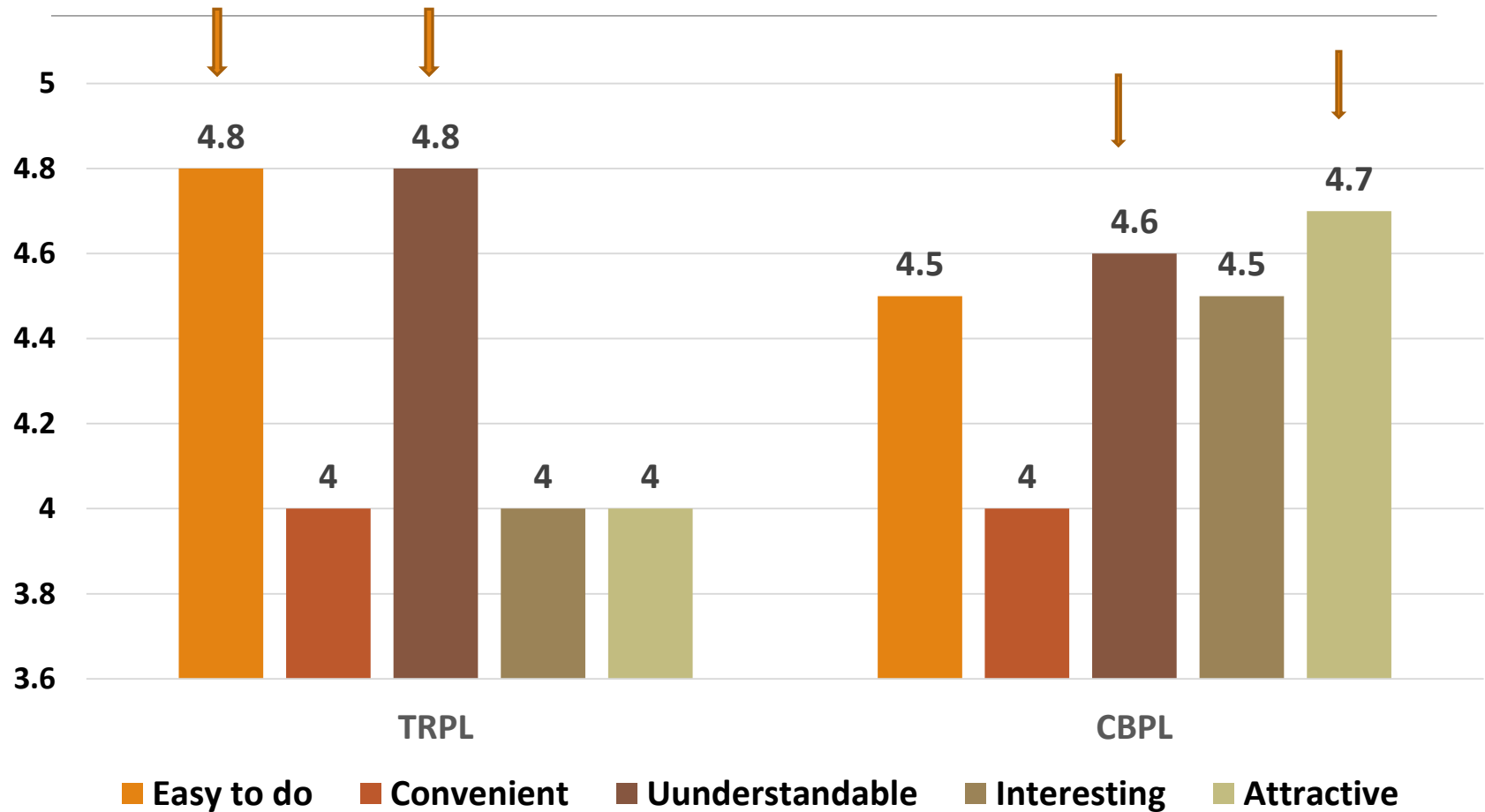
STUDENTS' PERCEPTION CASL VERSUS SBIL



MEAN SCORES IN PRACTICAL SESSIONS



Students' Perception TRPL versus CBPL



CONCLUSION

- In our study we found that the provision of support for students through CASL appears to be helping their learning and encouraged their interest in the topics taught
- CASL is an effective and interesting method of learning parasitology
- CBPL helps students to learn better in the practical sessions

FACULTY PERCEPTIVE

- Since parasitology subject has complex life cycles with detailed picture and descriptions ,I strongly support CASL& CBPL as powerful , interesting , attractive and valuable educational media in teaching parasitology



RECOMMENDATION



RECOMMENDATION

In light of the fore mentioned results recommendation is to be done in order to tailor and update parasitology curriculum to increase the frequency of small group learning specially the computer based





Thank you ...

