

# The application of the spot the difference teaching method in clinical skills training for residents

<b>Submission date</b> 30/03/2022	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 02/04/2022	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 03/05/2024	<b>Condition category</b> Other	<input checked="" type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Clinical skill training (CST) is indispensable for first-year surgical residents. It can usually be carried out through video-based flipped learning (FL) within a web-based learning environment. However, it was found that residents lack the process of reflection, blindly imitate results and lose interest and passion for learning in the traditional teaching pattern. The teaching method of "spot the difference" (SDTM), which is based on the fundamentals of the popular game of "spot the difference," is designed to improve students' participation and reflective learning during skill training. This study aims to evaluate this novel educational model's short-term and long-term effectiveness for surgical residents in China.

### Who can participate?

First-year residents who require a 3-month rotation in the head and neck surgery department

### What does the study involve?

Participants are randomly allocated into SDTM or traditional FL (control) groups. Their clinical skill performance is assessed with validated clinical skill scoring criteria.

### What are the possible benefits and risks of participating?

The experimental group may achieve better learning outcomes than the control group. The possible risk is the experimental group may fail to improve performance.

### Where is the study run from?

West China Hospital, Sichuan University (China)

### When is the study starting and how long is it expected to run for?

May 2019 to September 2020

### Who is funding the study?

Investigator initiated and funded

Who is the main contact?

Wen Li

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## Contact information

### Type(s)

Public

### Contact name

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### Protocol serial number

Nil known

## Study information

### Scientific Title

The application of the spot the difference teaching method in clinical skills training for residents:  
a prospective controlled trial

### Study objectives

The novel educational model's short-term and long-term effectiveness is better than the  
traditional method for surgical residents.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Approved 29/11/2019, the Institutional Review Board and Ethics Committee of the West China Hospital of Sichuan University (37 E Guoxue Alley, Chengdu, Sichuan, 610041, People's Republic of China; +86 (0)2885422851; huaxilunli@163.com), ref: not applicable

### **Study design**

Prospective controlled trial

### **Primary study design**

Interventional

### **Study type(s)**

Other

### **Health condition(s) or problem(s) studied**

Medical education (clinical skill training for first-year surgical residents)

### **Interventions**

A total of 87 residents are divided into eight subgroups in the order of rotation, and the subgroups are randomly sorted into either a traditional teaching group (the control) (n =42) or an experimental group (n = 45) using a web-based randomization program. All the residents watch the teaching video before class and then review the material (flawless and flawed) in class. The total duration of intervention and follow-up is 1 year.

### **Intervention Type**

Behavioural

### **Primary outcome(s)**

Performance (score) is measured using scoring criteria standards formulated following the 2020 China medical licensing examination at baseline, 3, and 12 months

### **Key secondary outcome(s)**

Pass rate of medical licensing examination (MLE) measured by collecting the MLE performance (<60 points is considered to be unqualified) at 12 months after training

### **Completion date**

30/09/2020

## **Eligibility**

### **Key inclusion criteria**

1. First-year residents who did not rotate to other surgical departments
2. Obtained a bachelor's degree in medicine

### **Participant type(s)**

Health professional

### **Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Total final enrolment**

87

**Key exclusion criteria**

1. Residents who had rotated to other surgical departments before the study
2. Senior residents (working time  $\geq 1$  year)
3. Residents with a graduate degree
4. Residents who have obtained the qualification certificate of a clinical practitioner

**Date of first enrolment**

30/09/2019

**Date of final enrolment**

20/10/2019

**Locations****Countries of recruitment**

China

**Study participating centre****West China Hospital of Sichuan University**

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China

Chengdu SC 28

**Sponsor information****Organisation**

West China Hospital of Sichuan University

**ROR**

<https://ror.org/007mrxy13>

# Funder(s)

## Funder type

Other

## Funder Name

Investigator initiated and funded

# Results and Publications

## Individual participant data (IPD) sharing plan

The raw data were deposited into the Mendeley Data dataset (<https://data.mendeley.com/datasets>) at <https://doi.org/10.17632/dfrxj839p8.1>

## IPD sharing plan summary

Stored in publicly available repository

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		14/07/2022	15/07/2022	Yes	No
<a href="#">Basic results</a>			24/08/2022	No	No
<a href="#">Dataset</a>		14/07/2022	03/05/2024	No	No
<a href="#">Protocol file</a>			24/08/2022	No	No