

# Educational quantitative research shortcuts are manageable and published

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# Types of Quantitative Research

Survey Research



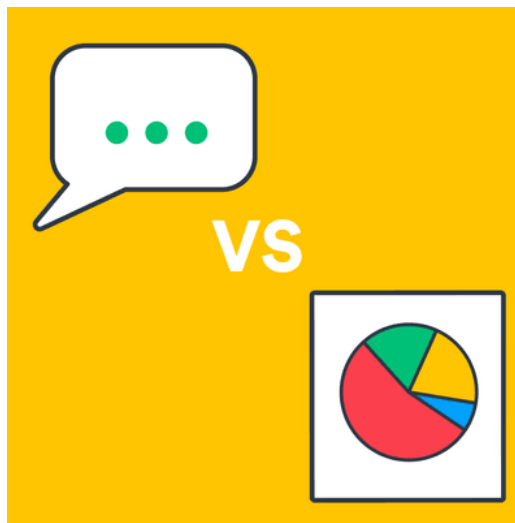
Descriptive Research



Experimental Research



Correlational Research





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- TCI
- International



# How do I get started

- ☐ Mentorship and networks อ ใหม่
- ☐ Formal training อ ใหม่
- ☐ Opportunity
- ☐ Focus on your research interest

## Focus on your research interest

Curriculum  
design

Faculty  
development

Simulation

Professionalism

Specific teaching  
pedagogies

WPBA



Review

# The impact and effectiveness of faculty development program in fostering the faculty's knowledge, skills, and professional competence: A systematic review and meta-analysis



Bilal <sup>a,\*</sup>, Salman Y. Guraya <sup>b,1</sup>, Songsheng Chen <sup>a</sup>

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Research | [Open access](#) | [Published: 24 July 2020](#)

## Quantifying professionalism in peer review

[Travis G. Gerwing](#) , [Alyssa M. Allen Gerwing](#), [Stephanie Avery-Gomm](#), [Chi-Yeung Choi](#), [Jeff C. Clements](#) & [Joshua A. Rash](#)

[Research Integrity and Peer Review](#) **5**, Article number: 9 (2020) | [Cite this article](#)

**13k** Accesses | **28** Citations | **223** Altmetric | [Metrics](#)

# **Entrustable Professional Activities (EPAs) and Workplace-based Assessment (WPBA)**

in Rehabilitation Medicine  
Residency Training in Thailand



การพัฒนารูปแบบการประเมินเพื่อการเรียนรู้ด้านการตระหนักรู้สถานการณ์ของนักศึกษาวิสัญญี  
พยาบาลโดยใช้เว็บแอปพลิเคชัน

นางปาริชาติ อภิตะชากุล



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# Research question

- PICO framework

**P**

Patient, Population or problem

**I**

Intervention

**C**

Comparison

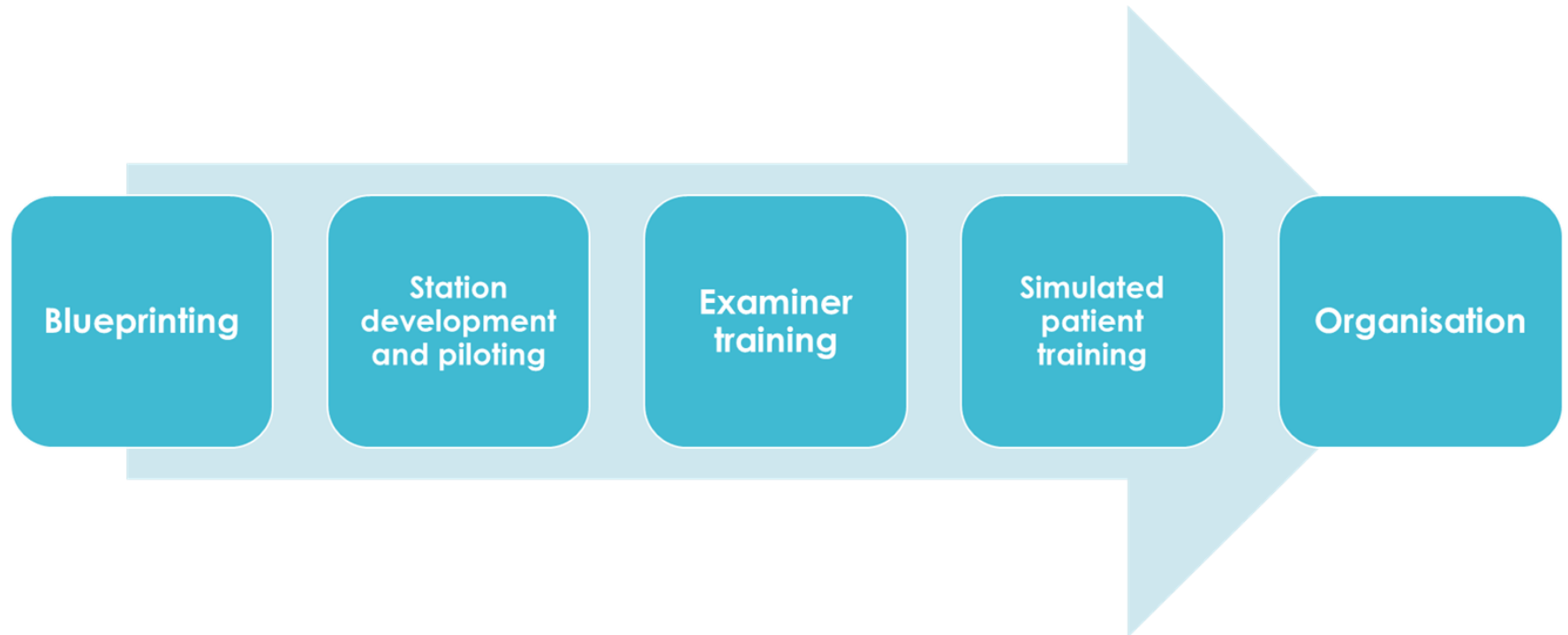
**O**

Outcome

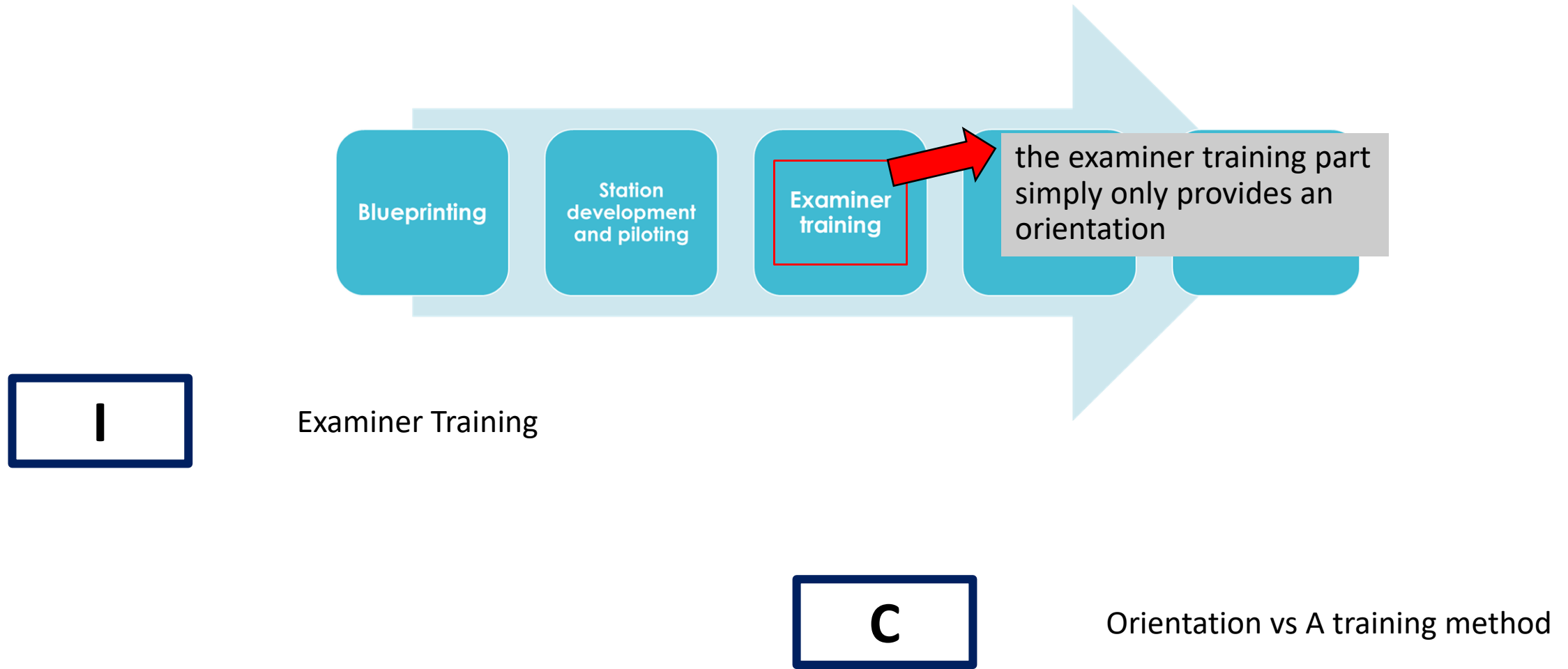
# PICO Example

**P**

Low OSCE Reliability



# PICO Example



# PICO Example

**P**

Low OSCE Reliability

**I**

Examiner Training

**C**

Orientation vs A training method

**O**

Increasing in reliability



# The Conceptual Framework

- Illustrates the expected relationship between your variables
  1. An independent variable is a variable that you can manipulate
  2. Dependent variable is the resulting variable that you are measuring
  3. Extraneous Variable is any variable that can potentially affect the outcomes of your research study

# Conceptual Framework Example



**Independent variable**



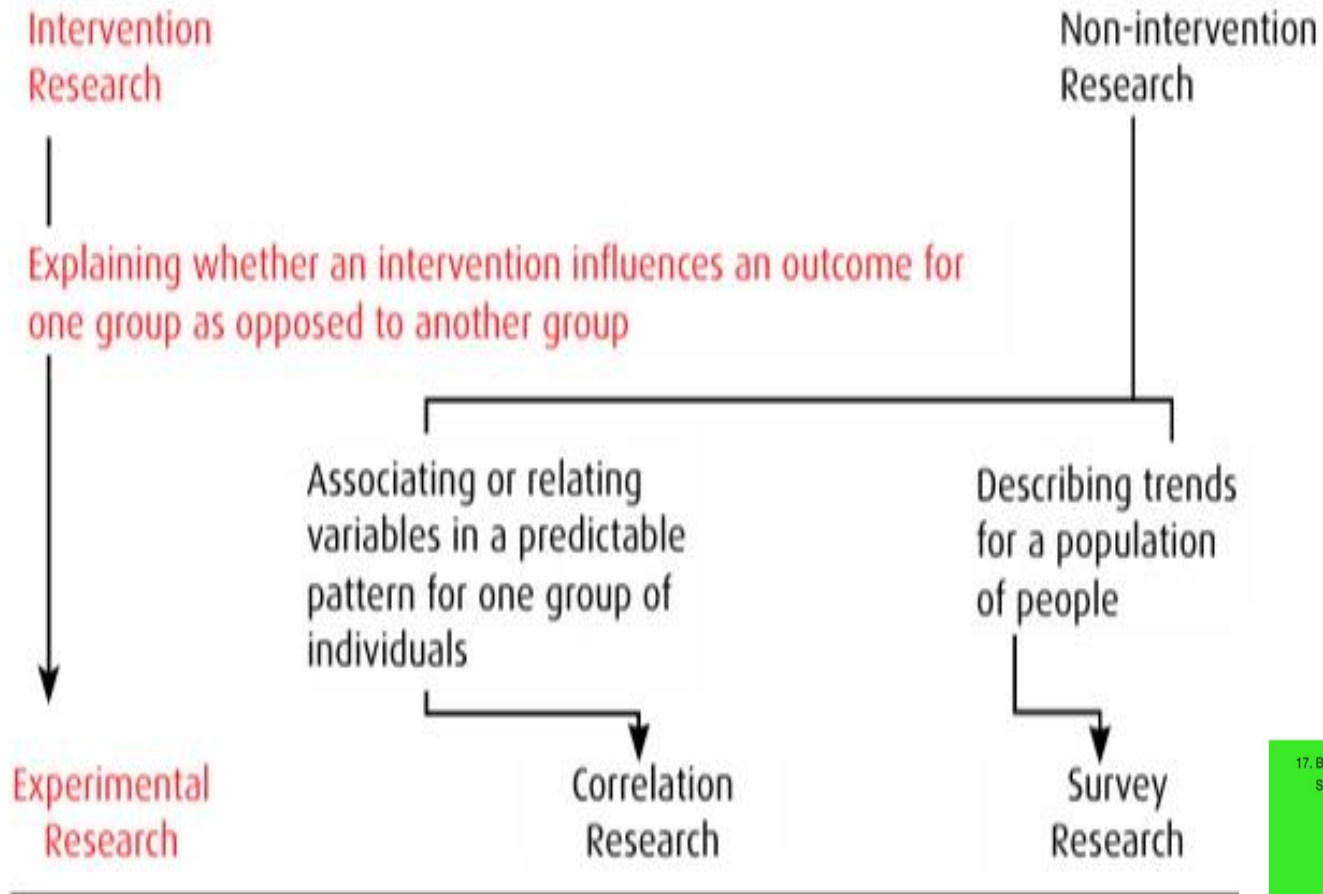
**Extraneous variable**



**Dependent variable**



# Research design



Earl Babbie

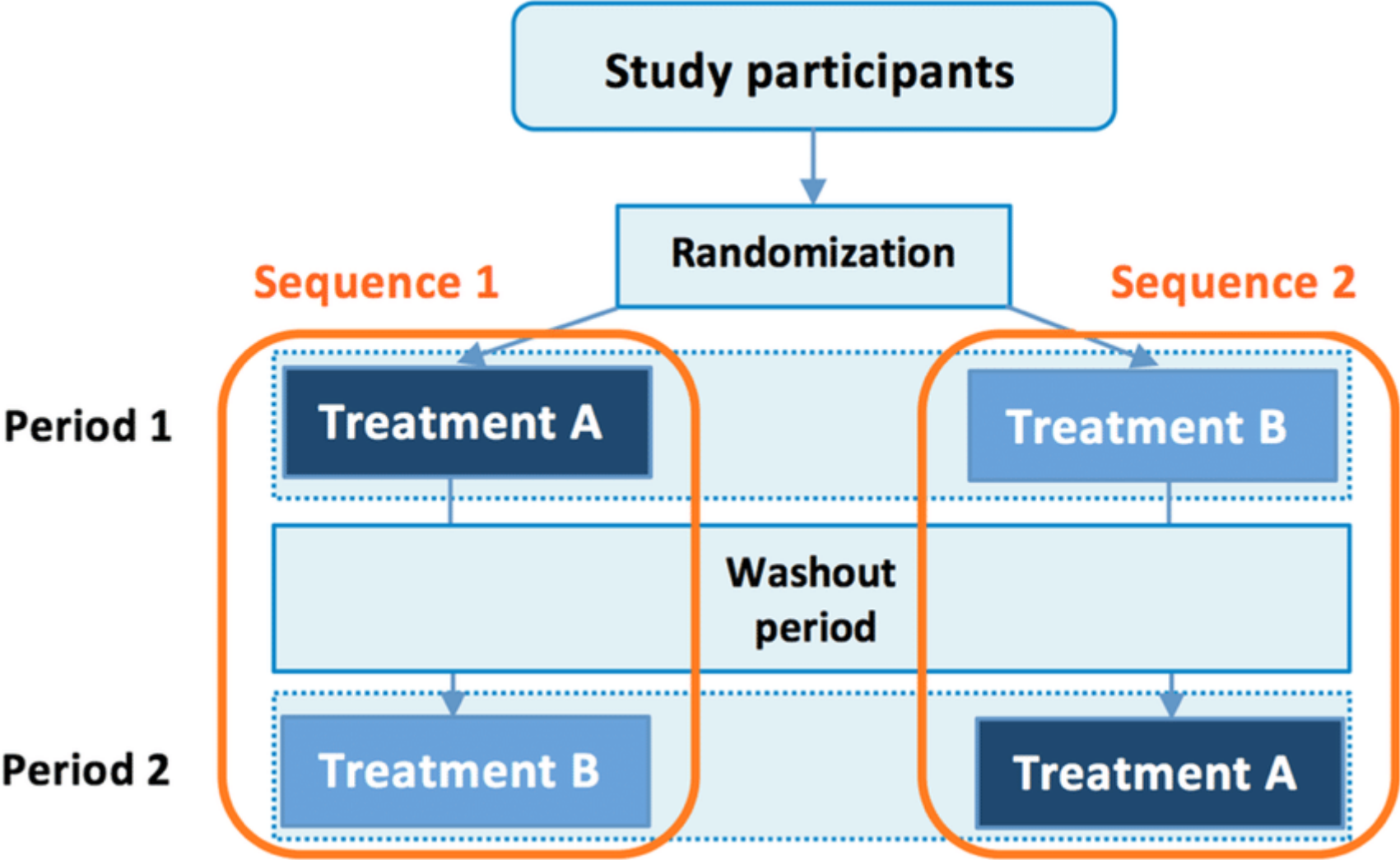
Experiments often involve putting people in unusual, controlled situations to see how they will respond.

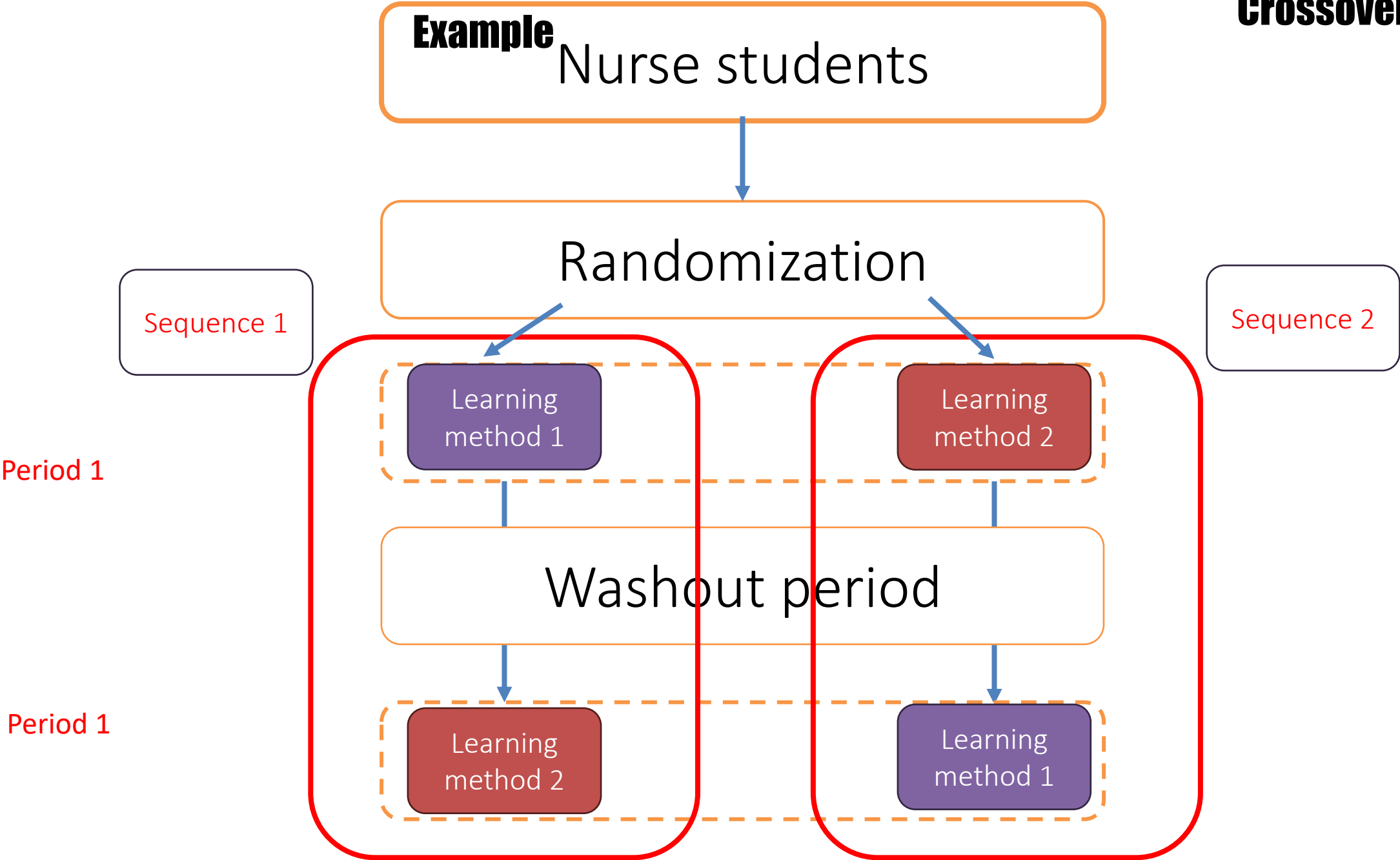
17. Beside each of the statements presented below, please indicate whether you Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), or are Undecided (U).

	SA	A	D	SD	U
a. What this country needs is more law and order.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The police should be disarmed in America.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. During riots, looters should be shot on sight.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
etc.					

FIGURE 9-5

**Matrix Question Format.** Matrix questions offer an efficient format for presenting closed-ended questionnaire items that have the same response categories.







# Research design



## Sampling

Sample Size Determination  
Single stage or multistage  
Power Analysis



## Measurement


Instruments and Measures  
Data Collection  
Procedures



## Analysis

Quantitative Data Analysis





## Management data

- Time
- Resources
- Expertise
- Paper-based
- Data storage



## Analyzing data

- Descriptive statistics
- Parametric

# Publication

- manuscript publication
- abstract submission
- local and national presentations

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## EDITORIAL

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# Getting Published in Medical Education: Overcoming Barriers to Scholarly Production

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**Suzanne Bentley, MD, MPH<sup>§</sup>**

**Megan L. Ranney MD, MPH<sup>||</sup>**

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[West J Emerg Med. 2018;19(1)1–6.]

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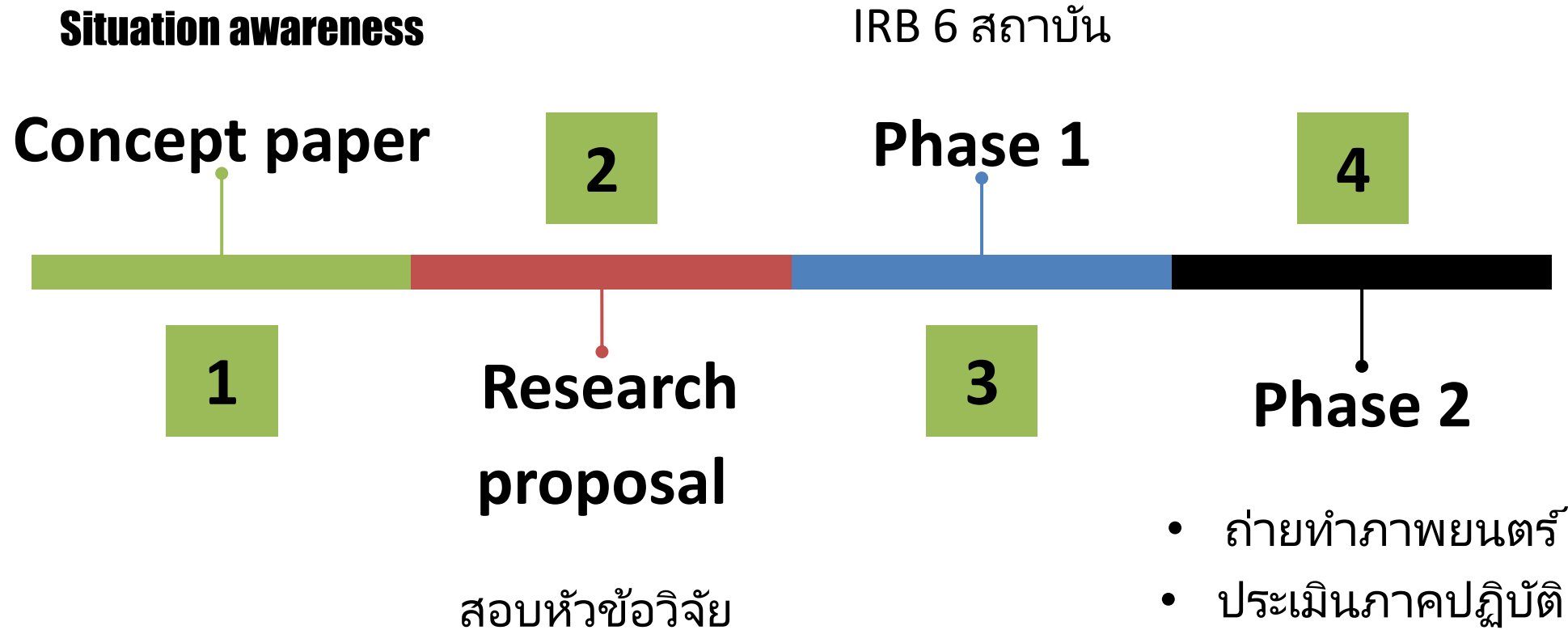
- ❖ Academic Emergency Medicine Education & Training
- ❖ Academic Medicine
- ❖ Advances in Health Professions Education
- ❖ American Journal of Emergency Medicine
- ❖ Annals of Emergency Medicine
- ❖ BMC Emergency Medicine
- ❖ Canadian Journal of Emergency Medicine
- ❖ Clinical Teacher
- ❖ Emergency Medicine Australasia
- ❖ Emergency Medicine Journal
- ❖ European Journal of Emergency Medicine

Gottlieb M, Dehon E, Jordan J, Bentley S, Ranney ML, Lee S, Khandelwal S, Santen SA. Getting Published in Medical Education: Overcoming Barriers to Scholarly Production. West J Emerg Med. 2018 Jan;19(1):1-6. doi: 10.5811/westjem.2017.11.35253. Epub 2017 Dec 22. PMID: 29383048; PMCID: PMC5785173.



- ❖ Internal and Emergency Medicine
- ❖ Journal of Continuing Education in Health Professions
- ❖ Journal of Graduate Medical Education
- ❖ Medical Science Educator
- ❖ Medical Education
- ❖ Medical Teacher
- ❖ Pediatric Emergency Care

# Beautiful moments



# Characteristics of a Successful Educational Researcher



## Organization

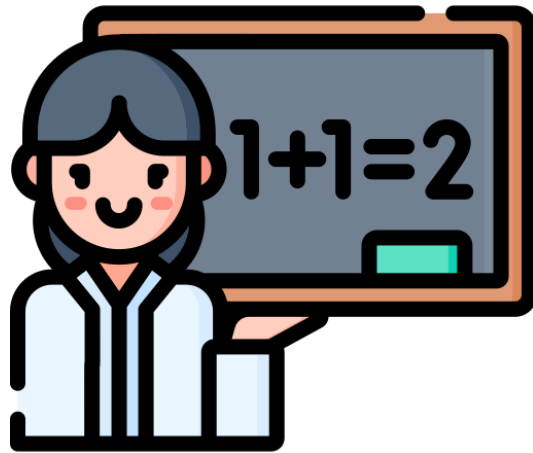
Organizational skills to their daily tasks and schedules.



## Creativity

Plagiarism must be avoided and innovation must be championed.

# Characteristics of a Successful Educational Researcher



## Judgment

Have good judgment when it comes to ethical dilemmas.

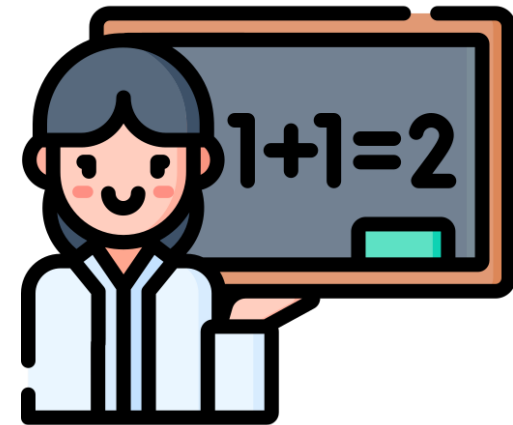
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## Persistence

Genius is one percent inspiration, ninety nine percent perspiration.

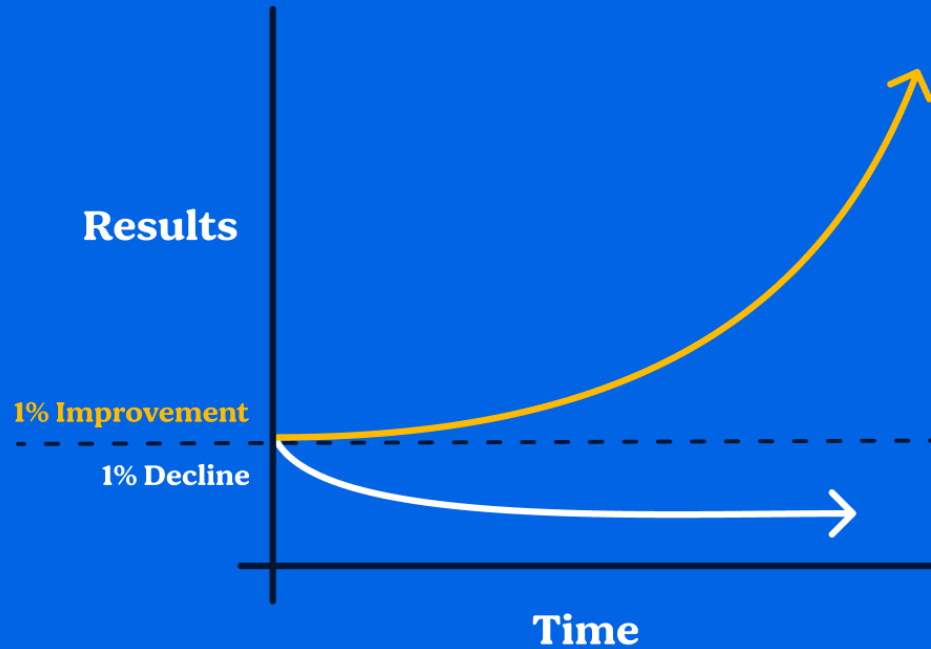
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## Communication

Develop and maintain effective teams and productive relationships

# 1% Better Every Day



1% better every day for one year.

$$1.01^{365} = 37.78$$

# Atomic Habits

Tiny changes,  
remarkable results





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