

GCU Library: Ask & Learn

Guide to Research Question Frameworks

Research question frameworks help you to organise the topic(s) you are interested to investigate, frame your research question and plan your research. This includes planning for empirical research and for structured literature review. There are lots of different research question frameworks available. See below for some examples (this is not an exhaustive list). For each example we have listed what each letter stands for, further explanation and an example research question that would fit into this framework.

PEO

Population – who is the focus of the research?

Exposure – what is the issue or experience or intervention of interest?

Outcomes – what is the impact of the exposure on the population of interest?

Example question:

What is the impact of short-term study abroad on the cultural competence of undergraduate students?

P = undergraduate students

E = short-term study abroad

O = cultural competence

PICO

Patient, Population or Problem – who or what is the focus of the research?

Intervention – what intervention is being investigated?

Comparison – what intervention is this being compared with (if any)?

Outcome – what are the effects of the intervention?

Example question:

How effective is mindfulness training versus cognitive behavioural therapy for smoking cessation?

P = smoking, smokers

I = mindfulness training

C = cognitive behavioural therapy

O = effectiveness

PICOC

Patient, Population or Problem – who or what is the focus of the research?

Intervention – what intervention is being investigated?

Comparison – what intervention is this being compared with (if any)?

Outcome – what are the effects of the intervention?

Context – In what context or place is the problem being investigated?

Example question:

What is the impact of short-term study abroad on the cultural competence of undergraduate students on exchange to a low-income country?

P = undergraduate student

I = short-term study abroad

C = none

O = cultural competence

C = low-income country

PICOS

Patient, Population or Problem – who or what is the focus of the research?

Intervention – what intervention is being investigated?

Comparison – what intervention is this being compared with (if any)?

Outcome – what are the effects of the intervention?

Study type – what study design(s) is being considered?

Example question:

How effective is mindfulness training versus cognitive behavioural therapy for smoking cessation: a meta-analysis of randomised controlled trials

P = smoking, smokers

I = mindfulness training

C = cognitive behavioural therapy

O = effectiveness

S = randomised controlled trials

SPICE

Setting – where is the study set?

Perspective – who's perspective is under investigation i.e. service user or service provider?

Intervention / Area of Interest – what intervention or area of interest is being investigated?

Comparison – what is this the comparison (if any)?

Evaluation – what are the outcomes?

Example question:

What are the experiences of postgraduate students of learning alongside students from other countries in online distance learning courses as compared with on-campus education?

S = online

P = postgraduate students

I = learning online alongside students from other countries

C = on-campus learning

E = outcomes measured by the research

SPIDER

Sample – the group of people being investigated

Phenomenon of interest – what is being investigated

Design – research methods used

Evaluation – outcome measures

Research type – qualitative / quantitative / mixed methods

Example question:

How motivated are young adults to quit smoking after a short mindfulness intervention?

S = young adult smokers

PI = short mindfulness intervention

D = survey

E = self-reported motivation to quit

R = quantitative

If you are unsure or need help identifying which framework would be most suitable for your research please seek support from your dissertation or research supervisor.