

## **What's Your Problem? Writing Effective Research Questions for Quality Publications**

PURVIS, Alison <<http://orcid.org/0000-0002-3581-4990>>, NICHOLAS, Victoria and TAI, Joanna

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# - oapa WEBINAR

## ***What's Your Problem?***

***Writing Effective Research Questions for Quality Publications***



**Joanna Tai**



**Alison Purvis**



**Victoria  
Nicholas**



**JUTLP**

Journal of University Teaching & Learning Practice

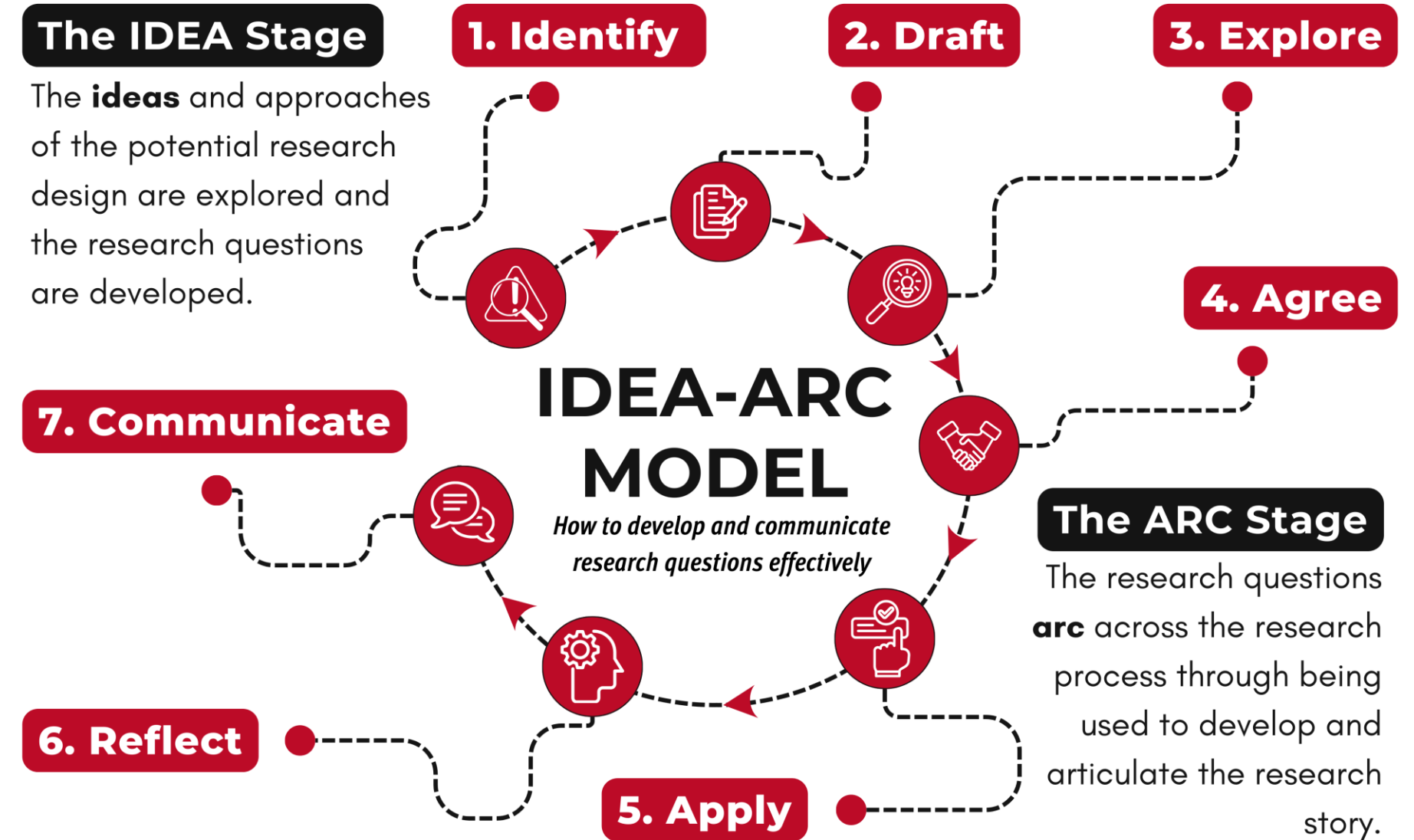
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- Please check that your **microphone is muted!** Please do not unmute unless invited to do so.
- We are **recording** this session. Please keep your camera off if you would not like to appear in the recording.
- Post questions in the chat preceded with **Question:** so that the chat moderator can spot the questions easily.
- **Introduce yourself in the chat!**

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***What's Your Problem?  
Writing Effective Research Questions for  
Quality Publications***

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**Joanna Tai**



**Victoria  
Nicholas**



**Alison Purvis**

## **OAPA, Seminar host**

- **Dr Elizabeth J. Cook** – Research Associate, Edith Cowan University, Australia.

## **Presenters**

- **Dr Victoria Nicholas** – Associate Dean Faculty and Strategy, The Open University, UK.
- **Dr Alison Purvis** – Associate Dean Learning, Teaching and Student Success, Sheffield Hallam University, UK.
- **Dr Joanna Tai** – Senior Research Fellow at the Centre for Research in Assessment and Digital Learning, Deakin University, Australia.



**Joanna Tai**

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# **The Background to Research Questions**

# The research question is a key co-ordinator

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- Originates from scientific enquiry
- Ensures alignment between intentions, the way we undertake the work, and what we report afterwards
- Supports quality and impact

## However

- Many articles in educational research lack research questions (Merchant et al., 2021)

# What can a research question do?

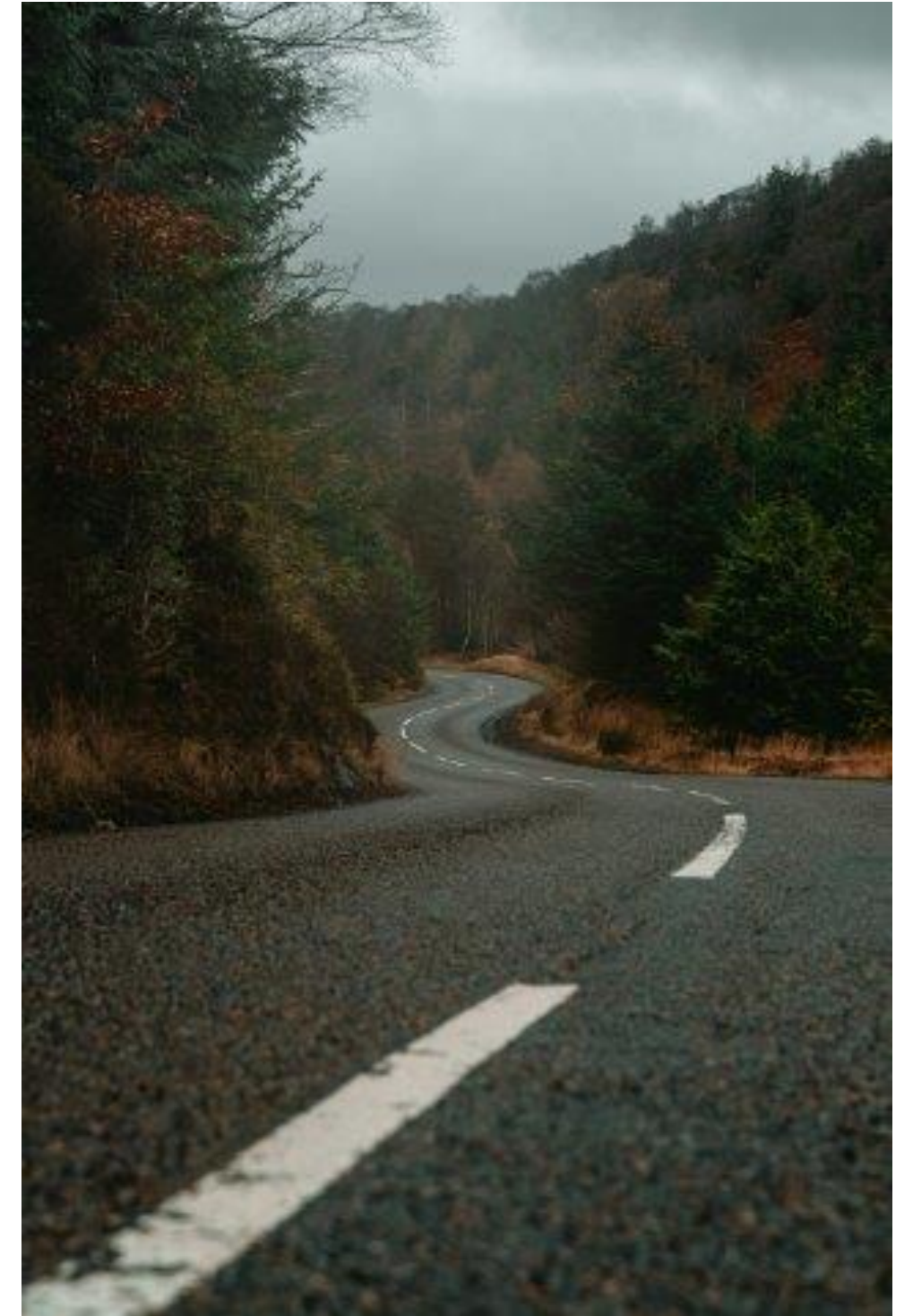
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- Defines the scope of research
  - Quantitative – with respect to hypotheses
  - Qualitative – sets focus and perspective
- Suggests a range of relevant methodologies and methods, and attendant ethical issues
- Ensures a continued focus throughout analysis and write-up
- For research synthesis – including quality appraisal
  - Indicates relevance of study to the topic of synthesis
  - In quantitative paradigms, important to be set (alongside hypotheses) at outset of study

# Developing research questions

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"Refinement and iteration will be necessary to arrive at a question (or set of questions) that appropriately address(es) the phenomenon or problem that is the subject of the investigation." (Purvis, Nicholas & Tai 2024, p3)





**Victoria Nicholas**

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# **The Characteristics of Research Questions**

# Characteristics of RQs

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- The RQ should take a broad topic and narrow down to a specific and researchable area of interest
- A good RQ frames all stages of the enquiry, including choice of method and analysis
- RQ frameworks can be useful (eg FINER, FINERMAPS, PICOT, SPIDER)
- Different types of RQ – Quantitative or Qualitative

Comparative

Relational

Contextual

Ethnographical

Evaluative

Descriptive

Predictive

Descriptive

Predictive

Emancipatory

Explanatory

Explanatory

Phenomenological

Grounded  
Theory



**Alison Purvis**

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# **The IDEA-ARC Model and Recommendations for Research Questions**

## The IDEA Stage

The **ideas** and approaches of the potential research design are explored and the research questions are developed.

## 7. Communicate

The presented research within a paper may address some of all the original research questions. Careful presentation of an accurate question or set of questions should be considered in preparation of a manuscript.

## 6. Reflect

Once the analysis has been completed, reflect further upon the research questions. This step is not about substantially altering questions to suit findings, but an opportunity for further refinement of the questions for optimal clarification of how the findings address the problem or phenomenon in focus. In the reflection stage authors are likely to identify incomplete answers or additional questions for a subsequent piece of research.

## 1. Identify

Identify the problem space for the research question. This should draw both on literature review and understanding phenomena or problems in practice. The initial investigation should establish the need and ethical considerations for the research to be conducted.

## 2. Draft

The background investigation, such as a literature review or systematic review, leads to research questions being drafted. Generate and iterate potential research questions which are appropriately targeted to the problem space identified in the initial step.

## 3. Explore

Consider different methods and approaches to the research questions, how suitable and feasible they might be, and ethical considerations associated with the anticipated methods. This may result in revision of the research question(s).

## 4. Agree

Once the methods have been explored and an approach is confirmed, the questions should be revisited and further developed. Undergo informal or formal processes for confirmation of the best fit of research question and proposed project. This could involve consultation with research team members or a supervisor, award/approval of a granting body, and/or ethical review processes.

# IDEA-ARC MODEL

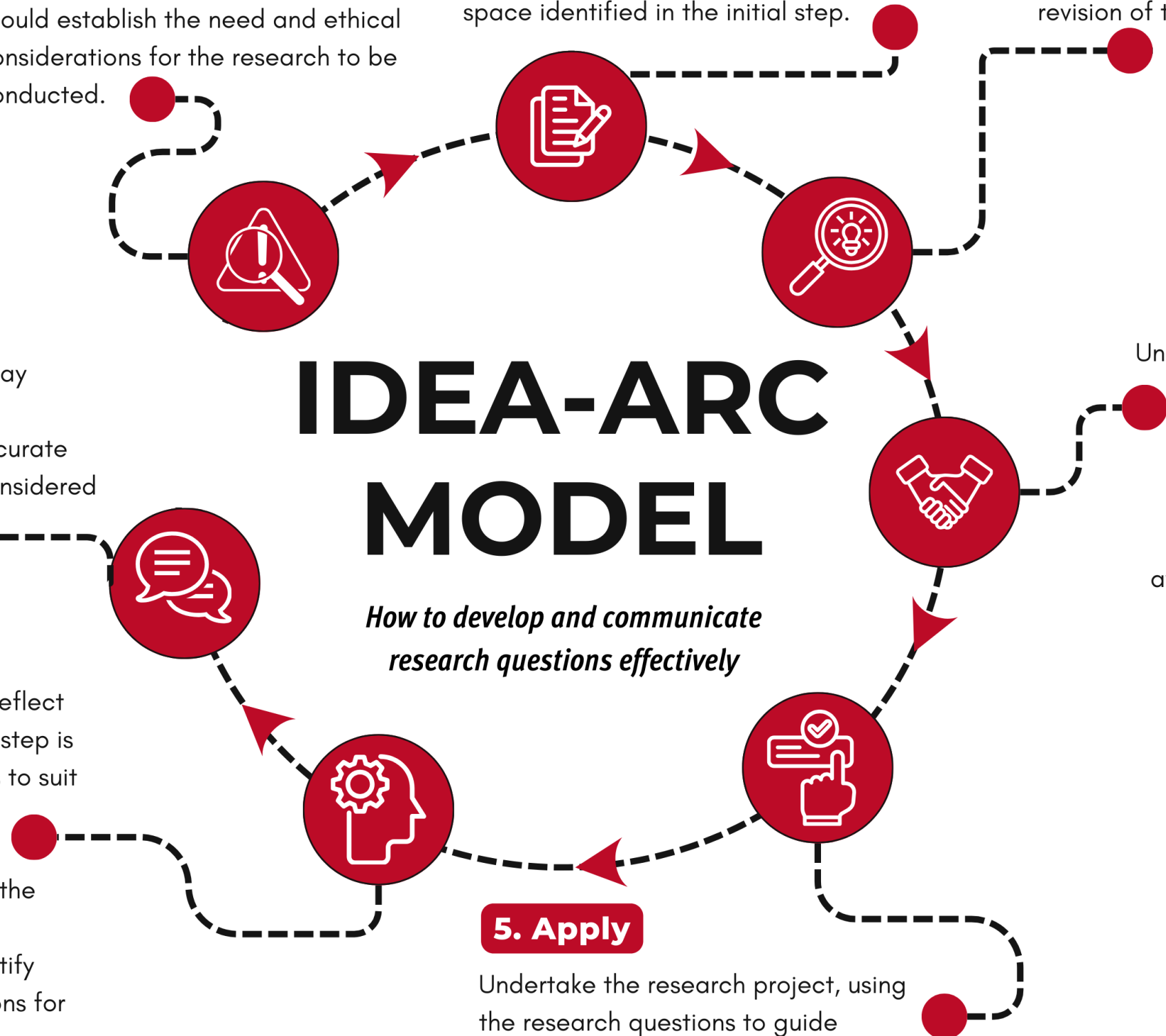
*How to develop and communicate research questions effectively*

## 5. Apply

Undertake the research project, using the research questions to guide throughout the research methods, data collection, and analysis of the findings.

## The ARC Stage

The research questions **arc** across the research process through being used to develop and articulate the research story.



## The IDEA Stage

The **ideas** and approaches of the potential research design are explored and the research questions are developed.

### 1. Identify

Identify the problem space for the research question.

### 2. Draft

Generate and iterate research questions targeted to the problem space.

### 3. Explore

Consider different methods, approaches and ethical considerations for the research questions.

### 4. Agree

Questions should be developed to confirm the best fit of question and project. This stage typically includes ethical review.

### 7. Communicate

Presentation of an accurate question/set of questions and how they are answered.

### 6. Reflect

Following analysis, reflect on the questions for optimal clarification of how the findings address the problem or phenomenon in focus.

### 5. Apply

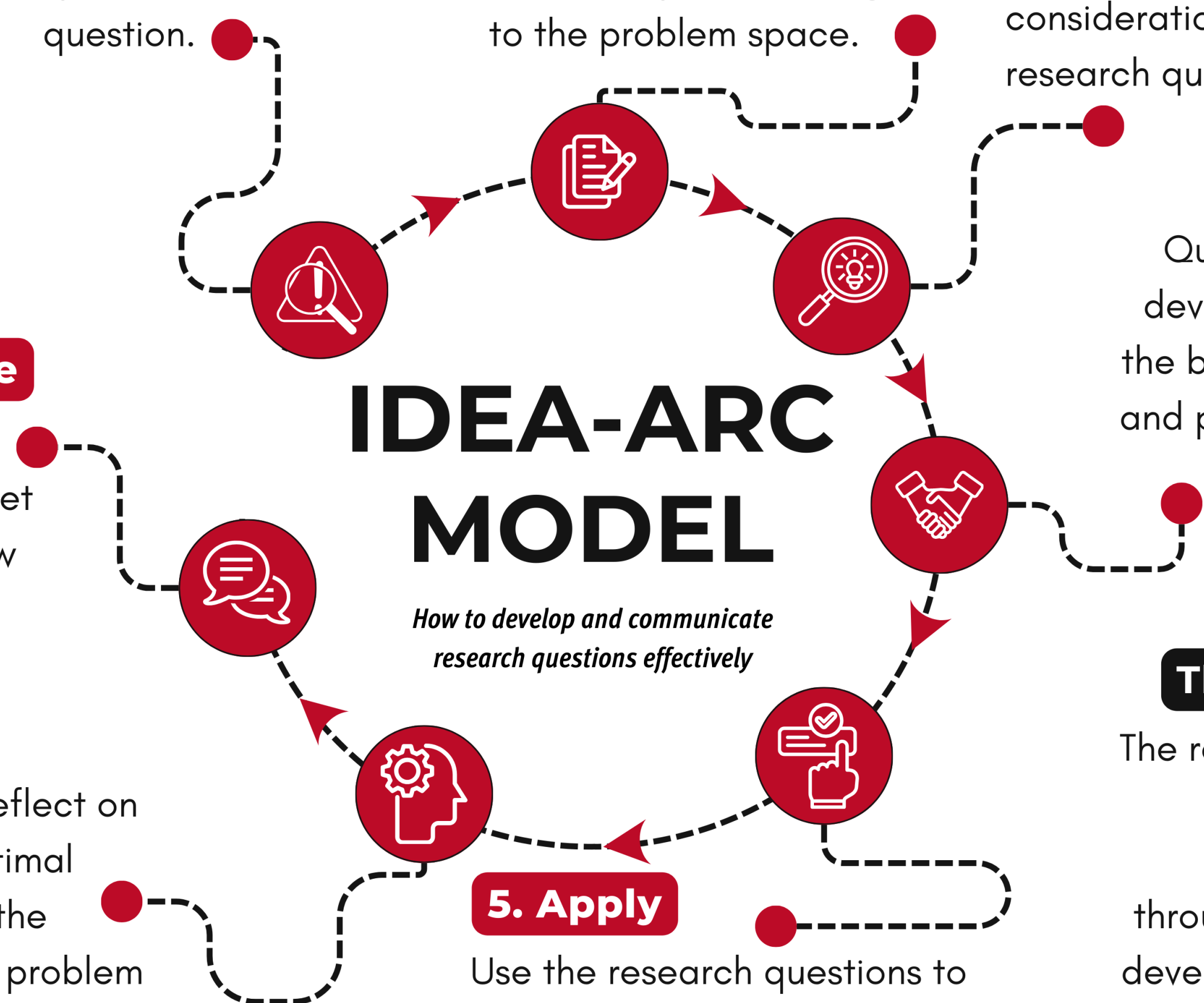
Use the research questions to guide throughout the research.

## The ARC Stage

The research questions **arc** across the research process through being used to develop and articulate the research story.

# IDEA-ARC MODEL

*How to develop and communicate research questions effectively*



# Recommendations

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## For Authors

1. Include research questions at the end of the introduction and/or literature review. The number of questions for journal articles is typically four or less.
2. Follow through with the research question from the introduction into the methods, results and discussion. Use research questions to guide your writing and thread a narrative through the paper.
3. Describe and set your methods, results and discussion in a way that shows you are answering the research questions and provide a summary of the answers to the research questions in the conclusion.

## For Reviewers

1. Ensure research questions are clearly communicated, and situated in a genuine problem and current research
2. Ensure the authors have used research questions explicitly, whether as a structural element (i.e. as subheadings, or referred to by notations such as RQ1) or embedded into the flow of the study.
3. Recommend clear, investigable and aligned research questions and advise on improving the quality of the questions if they do not meet this standard.

## For Editors

1. Be clear in your journal guidelines that research questions are good practice, and a mandatory requirement. If research questions are not included in a submission your guidelines should be clear that this a reason for rejection.
2. Provide additional guidance to authors about how to write research questions. Share open access resources to support your authors in producing high quality papers.
3. Be clear in your expectations with reviewers and editors so they can guide authors in the effective use of research questions to enhance the quality of publications.



**Activity**

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**Writing Research  
Questions**

## 1. Identify

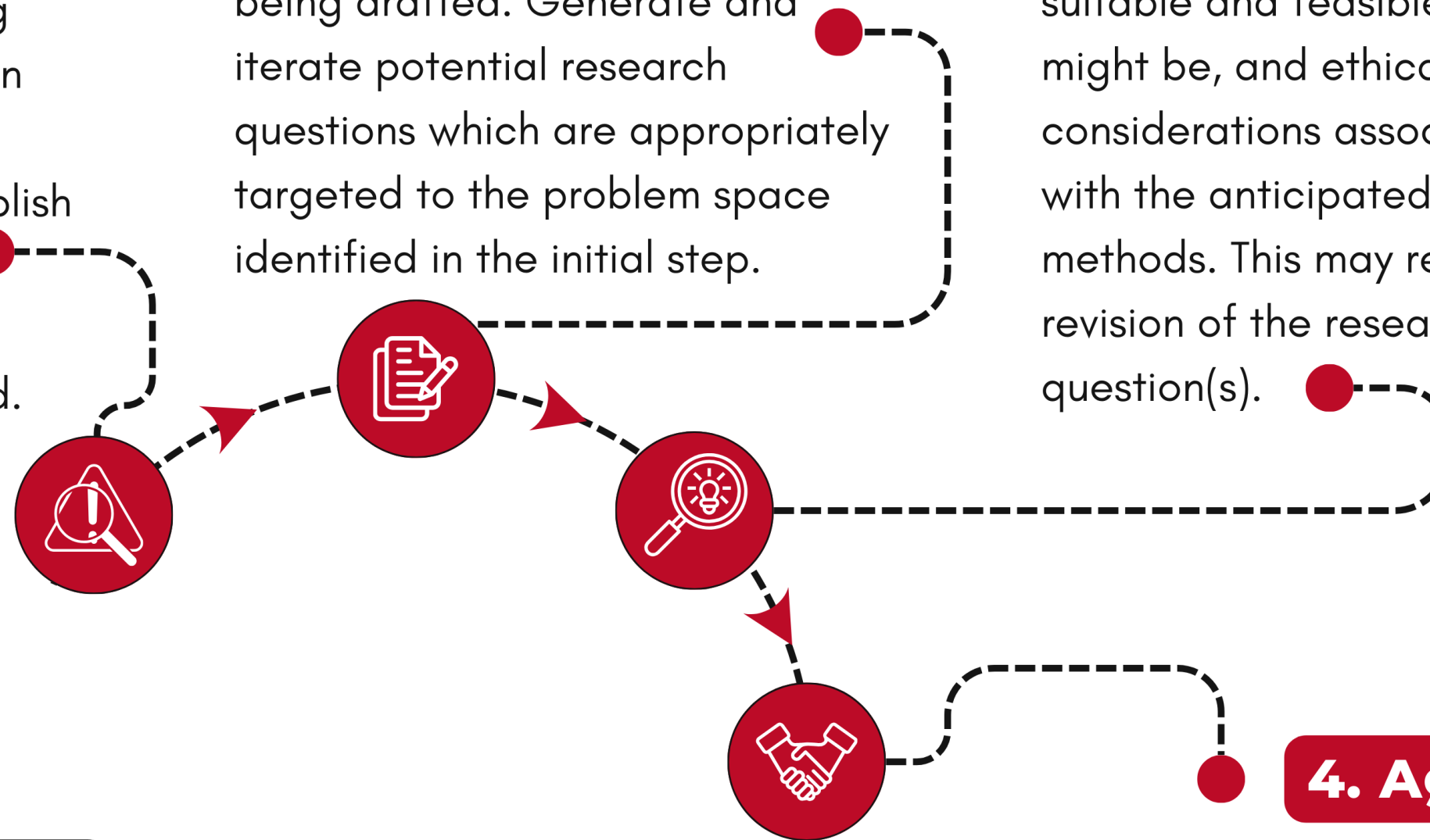
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## The IDEA Stage

The **ideas** and approaches of the potential research design are explored and the research questions are developed.

# Prompts for discussion

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- Introduce yourself, and your background / discipline area
- What's your problem space and tentative question?
- How do you plan to tackle it?
- What isn't sitting right for you at the moment? What do you need advice or help on?