## Framing your Research Question with Entrepreneurial Mindset: Instructor Guide

### Workshop learning objectives

After completing this workshop, students should be able to…

* Describe at a high level how the framework of Entrepreneurial Mindset can be applied to research, emphasizing the connections between research opportunities, research plan, and research impact.
* Use the technique of connecting broad statements to specific claims to help formulate a research question.
* Use concept mapping to help identify open questions in their research project and collect information needed to understand their research opportunity.
* Identify key stakeholders for their research project and describe the interests of those stakeholders.

### Preparing for the workshop [approximately 2 hours prep time]

* Reserve a space for the workshop and advertise to students. The workshop as outlined below can be completed in 1 hour but can be adjusted by facilitators as needed.
  + Students do not need to complete any pre-work for this workshop
  + Students should bring their laptop, **OR** the facilitator should print paper copies of the student slide deck and resources document.
* Designate a workshop facilitator. The facilitator will use this instructor guide, supplemental materials, and the provided slide deck to guide students through the workshop activities and encourage discussion.
* The facilitator should review the following documents in advance of the workshop
  + The KEEN Framework: A Guide for Entrepreneurial Mindset (if the facilitator is not already familiar with this framework)
  + Instructor Slides, including reading the notes section and watching the video
  + Optional additional reading
    - *The Craft of Research*, 4th edition, Chapters 3 and 4 (From Topics to Questions, From Questions to a Problem)
    - What is transdisciplinary research? (Utrecht University) <https://www.uu.nl/en/research/transdisciplinary-field-guide/get-started/what-is-transdisciplinary-research>
    - How to do stakeholder analysis (Prof. Mark Reed) <https://www.fasttrackimpact.com/post/2019/03/11/how-to-do-stakeholder-analysis>
    - Nezafati, M., Reizman, I., Marincel Payne, M., Liu, L. (2023). Development of entrepreneurial mindset-driven training materials for undergraduate researchers. Paper presented at 2023 ASEE Annual Conference, <https://peer.asee.org/43158>.
* Upload the student slide deck and student resources document to a location that will be accessible to students (Google drive, LMS, etc.), or print hard copies to share with students.

### Workshop structure

|  |  |
| --- | --- |
| **Activity** | **Approximate recommended time** |
| Introduction and workshop video | 5 min |
| Debrief from video | 5 min (slide 2) |
| Activity 1: Narrowing your research question | 7 min (slide 3) |
| Activity 2: Entrepreneurial mindset and research concept map | 13 min (slides 4-5) |
| Activity 3: Stakeholder analysis and engagement | 15 min (slides 6-9) |
| Review and group discussion | 15 min (slide 10) |
| Total | 60 min |

### Day of the workshop [approximately 1 hour]

As students enter the classroom, ask them to download the student slide deck and additional resources document (or hand out these documents if they are in hard copy).

The workshop is guided by the facilitator using the Instructor Slide Deck. **Suggested questions and organizational notes for the facilitator are in the notes section of each slide.**

* Start the workshop with the introductory video [5 minutes]
  + After the video, the remainder of the workshop is guided by the facilitator using the Instructor Slide Deck.
* Slide 2: Why are you doing research? [5 minutes]
  + Suggested questions and organizational notes for the facilitator are in the notes section of each slide.
  + For larger groups, the facilitator may want to use a tool such as a [Jamboard](https://jamboard.google.com/u/0/) or [Poll Everywhere](https://www.polleverywhere.com/) to aggregate student answers on their motivation for research.
* Slide 3: What are you researching? [7 minutes]
  + Students will need to start using the Student Slides on their laptop to type ideas, or they can write on paper copies.
* Slide 4: Introducing KEEN Framework for Entrepreneurial Mindset as applied to research [3 minutes]
  + This is a very brief introduction and can be expanded as time allows.
* Slide 5: Example concept map [10 minutes]
  + For younger researchers, the facilitator may want to spend more time discussing the example concept map and the types of questions to brainstorm.
  + Students can use the second slide in the student slide deck as a starting point for the concept map or draw their own.
* Slides 6 – 7: Stakeholder analysis [10 minutes]
  + Students will use the last slide in their slide deck to complete the stakeholder analysis. After this workshop, they are able to save these three slides and continue building on them for subsequent workshops. At the end of all workshops, they have a slide deck portfolio, illustrating some ways to integrate entrepreneurial mindset into their research experience.
* Slides 8 – 9: Stakeholder engagement [5 minutes]
  + Some other models of stakeholder engagement are very briefly introduced in these slides. For longer workshops, the facilitator can expand on these resources or give additional time for discussion.
* Slide 10: Review and discussion [15 minutes]
  + Students have time to discuss their brainstorming in the workshop and trade ideas in small groups. The group discussion also helps students build a network with other young researchers. A suggested structure for discussion is included in the slide notes.
  + The workshop ends with a report out from 1-2 small groups to the full group and discussion as time allows.

### Alternative formats

The workshop materials are designed to be easily adapted for virtual format, for reaching remote research students or for delivering the contents to students across multiple universities at once. For that case, the facilitator preparation will include sending meeting links for the remote workshop and setting up breakout rooms for the final discussion sessions.