



Forming the Research Topic

Identify general topics of interest

Narrow down the broad topic

Focus the research paper

Form the research title

Mind map the research framework

Identify the keywords

Define search strategies

Forming the Research Topic

The broad view: identify general topics of interest

General topics of interest:

stem cell

inclusion (education)

intervention (education)

robotics (computing)

artificial intelligence (computing)

mobile app (business)

opportunities (business)

Start with reading quality, credible resources on the topic of interest.

Credible Sources

- Works by authors qualified, respected, and well-known in their fields.
- Materials published in the last ten years, with citations, peer reviewed.
- Websites by governments (.gov), educational institutions (.my) where the information is unbiased, factual, regularly updated with authorship.

Non Credible Sources

- Blogs, Facebook posts, or other opinion based news
- that are self-authored.
- Research articles without citations.
- Websites with not much information for learning. If the purpose is not to inform but rather to persuade, the site may not be credible.

Forming the Research Topic

The narrow view: specific aspects of the general topic

Stem cell is a very broad topic.

We need to narrow down the topic to something more specific.

We can do that by asking questions about the topic.

- What are the interesting points about the topic?
- What is the usefulness of the topic?
- What effects on society does the topic have?
- What misconceptions do people have about the topic that needs clarification?
- What myths exist about the topic that need to be dispelled?
- What are the past and current research being carried out on the topic?

Forming the Research Topic

The narrow view: focusing the research topic

- What is stem cell research and why is it an issue based on past and current research activities?
- What are the potential benefits or applications of stem cell research?
- What are the drawbacks?
- What viable alternatives are there?
- What % of Malaysians support stem cell ?
- How is the Malaysian government involved in the research activity in terms of funding?
- Any private funding options available?
- What are the hindrances to stem cell research in Malaysia?

Stem cell research in Malaysia.

Stem cell research in Malaysia should be promoted through research funding.

Stem cell research in Malaysia should be promoted through research funding by both the Government and the private sector.

Stem cell research in Malaysia should be promoted for health therapies through government and private sector funding.



Forming the Research Topic

Asking questions on the general topic leads to ...

- **Focusing** and therefore **narrowing** the topic leads to a strong research title.
- The creation of a **research** or **thesis statement** which becomes the **backbone of the research paper**.
- Generate **keywords** from the thesis statement which will be used to **conduct searches** for materials that contribute to the thesis statement.



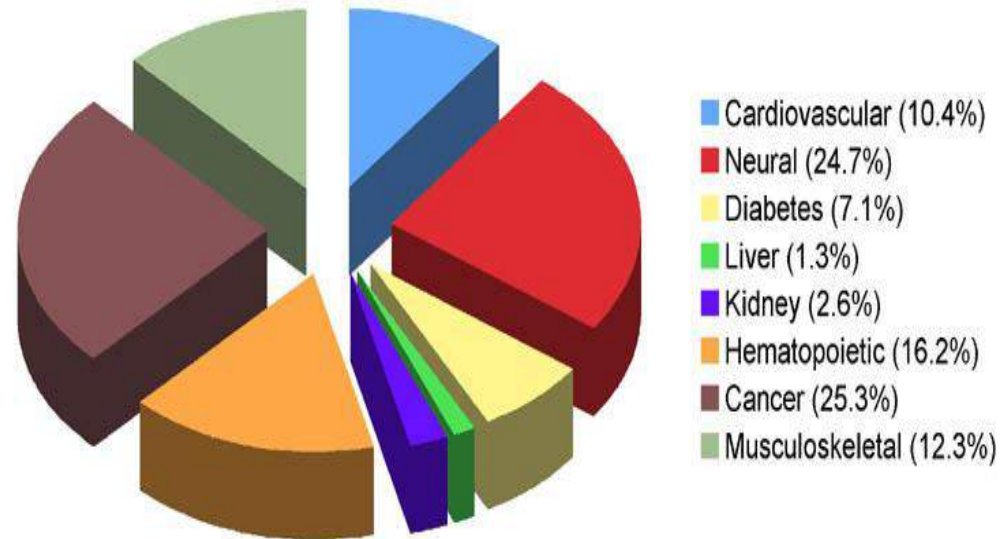
Forming the Research Topic: **the Research Title**

Stem cell research in Malaysia should be promoted for health therapy through government and private sector funding.

Possible keywords:

- “stem cell”
- stem cell research
- health therapy
- fund
- government
Malaysia
- private sector

Disease Focus of NYS Stem Cell Research



<http://stemcell.ny.gov/stem-cell-research-new-york-state>

Forming the Research Topic: **the Main Title**

Characteristics of effective titles in academic research papers:

- **10 to 15 substantive words**
- **Does not include redundant phrasing, such as, "A study of," "An analysis of" or similar constructions.**
- **May be in the form of a question or declarative statement.**
- **Indicate accurately the subject and scope of the study.**
- **Use words that create a positive impression and stimulate reader interest.**
- **Can have a subtitle.**

Forming the Research Title: **the Subtitle**

Examples of subtitles:

Add on information to title: "Linguistic Ethnography and the Study of Welfare Institutions as a Flow of Social Practices: The Case of Residential Child Care Institutions as Paradoxical Institutions." [Palomares, Manuel and David Poveda. Text & Talk: An Interdisciplinary Journal of Language, Discourse and Communication Studies 30 (January 2010): 193-212]

States the geographic scope of the research: "The Geopolitics of the Eastern Border of the European Union: The Case of Romania-Moldova-Ukraine." [Marcu, Silvia. Geopolitics 14 (August 2009): 409-432]

Qualifies the temporal scope of the research: "A Comparison of the Progressive Era and the Depression Years: Societal Influences on Predictions of the Future of the Library, 1895-1940." [Grossman, Hal B. Libraries & the Cultural Record 46 (2011): 102-128]

Focuses on investigating the ideas, theories, or work of a particular individual: "A Deliberative Conception of Politics: How Francesco Saverio Merlino Related Anarchy and Democracy." [La Torre, Massimo. Sociologia del Diritto 28 (January 2001): 75 - 98]

Identifies the methodology used: "Student Activism of the 1960s Revisited: A Multivariate Analysis Research Note." [Aron, William S. Social Forces 52 (March 1974): 408-414]

Forming the Research Topic

Identifying keywords from the research title

Stem cell research in Malaysia should be promoted for health therapy through government and private sector funding.

Possible keywords from the title itself:

- “stem cell”
- stem cell research
- health therapy
- fund
- government
- Malaysia
- private sector

- Brainstorm the research title for related concepts to get more keywords.
- What health therapies does stem cell play a part in?
- What are the government’s policies on stem cell research?
- Which private companies are directly involved in stem cell research?
- What are the types and their statistics of stem cell applications?
- Generate more keywords from the second collection of questions asked concerning the topic of research.
- Use mind maps; circle maps or any visual representations which gives a clearer and more focused picture of the research.

Reference: <http://www.ulm.edu/library/guides.html>



Forming the Research Topic

Identifying keywords to search for resources

Stem cell research in Malaysia should be promoted for health therapy through government and private sector funding.

Keywords derived from research title

stem cell
research
promotion
health therapy
government
private sector
funding

Keywords that are words related to concepts or words in the research title

cell biology
somatic cell
health care
research support
medical treatment
public

private enterprise
hospitals
medical institutions
grant
sponsor
endowment

Forming the Research Topic: **form Search Strategies**

Keywords can be search one by one on its own e.g. stem, cells, private, government, etc.

or

They can be searched as a phrase e.g. “stem cell”, “private sector”, “government funding”, “health therapy”, “Malaysian government”, etc. by using the quotation marks “....”.

The keywords and the keyword phrases can be combined using (AND, OR, and NOT) to produce different results. AND, OR, NOT are called Boolean Operators.

Keywords join together (nesting) by Boolean Operators become search strings, e.g.

“stem cell” AND “health therapy”

“stem cell” AND “health therapy” AND government OR private

“stem cell” AND “health therapy” NOT “traditional treatment”

Use truncation to find all the variants of a root word e.g. heal? will find healing, healthy, healer; cell? will find cells, cellular, ...

Truncation symbols may vary by database; common symbols include: *, !, ?, or #



Forming the Research Topic: **Additional Tips**

**After defining the search strategies
determine which books, academic databases,
and authoritative resources such as educational,
or government portals to search into.**

**The Koha Advanced Search techniques
can also be applied in searching databases.**

**The databases themselves have built in operators,
limits and filters to help you in your search
coupled with their own search guides to assist the user.**



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