

Resource – Idea-Proposal-Template (IPT)	Version 1.2, May 2023
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Idea Proposal Template

Idea Proposal Template (IPT) is the first of four templates. IPT will help to get started with your ET research. You can use this IPT to identify the novelty in your idea and position it with respect to related work.

Q1. What teaching-learning problem are you trying to solve?

Answer to Q1.

Q2. What is your idea to solve the problem?

If your idea is on instructional strategies, briefly describe:

- a) What will you do during the execution of the idea?
- b) What will your students do during the execution of the idea?
- c) What do you expect to improve due to your idea?

If you are developing a tool, state:

- a) What will the tool do?
- b) What inputs does the tool require?
- c) What outputs will the tool produce?
- d) What is a user of the tool expected to do?

If you are doing an analysis of data, state:

- a) What is unique about your data?
- b) What analysis methods are you planning to use?
- c) What will be the impact on practice (of learning and teaching) based on the analysis?

Answer to Q2.

Q3. How do you know if your idea is likely to work?

Describe the educational study (or hypothesis) that you can do to test your idea. Indicate what you will measure to gather scientific evidence, and how you will measure it.

Answer to Q3.

Q4. What is the related work for your idea?

a) Find and list three papers related to the problem your idea attempts to address (Q1) and/or to the proposed solution in your idea (Q2); find at least one paper related to Q1 and one related to Q2. Write the entire citation of the paper - Title, Authors, Journal /Conference and Year.

Make sure that the papers are from published journals or established conference proceedings. To find sources for the papers and how to do a literature review, see Guidelines C1-C3, pages 44-61 (Part C – Guidelines) in [TR-ET-2013-01.pdf](#).

Paper 1	<i>Title:</i> <i>Authors:</i> <i>Journal/Conference:</i> <i>Year:</i>
Paper 2	<i>Title:</i> <i>Authors:</i> <i>Journal/Conference:</i> <i>Year:</i>
Paper 3	<i>Title:</i> <i>Authors:</i> <i>Journal/Conference:</i> <i>Year:</i>

Q4.b) Compare the details in your idea (Q2) with what is done in each paper you listed in Q4a), along different dimensions. Each dimension is listed as a question in a separate table. We recommend that you select a minimum of three dimensions (preferably 1, 2, 3) while answering this question.

What exact problem(s) is being addressed?	DIMENSION 1
	Paper1
	Paper2
	Paper3
	My idea

What are the details of the solution? Include details such as: For instructional strategies: <ul style="list-style-type: none"> • What is the setting (classroom/ online/ blended/ other)/? • What is the domain? • Is it a computer-based strategy? • What is the duration of the treatment? For the development of tools: <ul style="list-style-type: none"> • What is the setting for the use of the tool? • What are the main modules in its implementation? • What all testing has been reported? For the analysis of data: <ul style="list-style-type: none"> • What is the setting or context in which the data collection is carried out? • What criteria were used to select the dataset for analysis? • What are the main variables or features considered in the analysis? • What statistical or analytical methods are employed in the data analysis? 	DIMENSION 2
	Paper1
	Paper2
	Paper3
	My idea

For instructional strategies: <ul style="list-style-type: none"> • What does the instructor do? • What do the students do? For the development of tools: <ul style="list-style-type: none"> • What does the user have to do? • What does the tool do automatically? 	DIMENSION 3
	Paper1
	Paper2
	Paper3
	My idea

What educational theory* is the strategy/tool in the paper based on?	DIMENSION 4
	Paper1
	Paper2
	Paper3
	My idea

What is the research design for the study? What experiments have been performed to evaluate the strategy/tool? What scientific/statistical measures have been used to validate the analysis?	DIMENSION 5
	Paper1
	Paper2
	Paper3
	My idea

What is being measured? How is it being measured?	DIMENSION 6
	Paper1
	Paper2
	Paper3
	My idea

What evidence is collected? Give examples.	DIMENSION 7
	Paper1
	Paper2
	Paper3
	My idea

* Note on educational theories: In the papers you refer to, look for educational theories or concepts such as active learning, project-based learning, collaborative learning, formative assessment, scaffolding, higher-order thinking, etc. Pay attention to how the authors have applied these theories to their problems. Note that these are technical terms, don't use them loosely; get to know their precise meanings.

Q5. To build the review of related work for your study, you need to follow the literature review in the papers you surveyed in Q4. You need to identify relevant references within each paper. A reference can be relevant for different purposes: (a) building your background of the broad area of your paper, (b) formalizing the theoretical basis of your idea, and (c) positioning your idea with respect to related work.

Go through the references cited in each of the three papers you surveyed. For each purpose listed in (a)-(c), identify relevant references from the surveyed papers and answer the questions below. You will need these answers to write the Related-Work / Literature-Review section in your paper.

Q5.a) Purpose: Building my background of the area

i) Identify references for the above purpose.

From Paper1, the references I need to read for building my background are: i) _____, ii) _____.

From Paper2, the references I need to read for building my background are: iii) _____, iv) _____.

From Paper3, the references I need to read for building my background are: v) _____, vi) _____.

ii) Read the identified references.

iii) Draw a concept map that describes the background for your study, based on the references you read. You can construct the concept map by hand, or use a concept mapping tool such as [IHMC C-Map Tools](#), [Coggle](#) and so on, which are available for free use. [OPTIONAL]

Concept Map

Q5.b) Purpose: Formalize the theoretical basis of your idea

i) Identify references for the above purpose.

From Paper1, the references I need to read to formalize the theoretical basis of my idea are: i)____, ii) ____.

From Paper2, the references I need to read to formalize the theoretical basis of my idea are: iii)____, iv)____.

From Paper3, the references I need to read to formalize the theoretical basis of my idea are: v)____, vi) ____.

ii) Read the references.

iii) Write a paragraph below summarizing the theoretical basis of your idea, based on the references you read. You can include this paragraph in the Background and Related Work section of your paper.

Q5.c) Purpose: Positioning my idea with respect to related work

i) Identify references for the above purpose.

From Paper1, the references I need to read for positioning my idea are: i) _____, ii) _____.

From Paper2, the references I need to read for positioning my idea are: iii) _____, iv) _____.

From Paper3, the references I need to read for positioning my idea are: v) _____, vi) _____.

ii) Read the references.

iii) For each paper you read, repeat the exercise Q4b), that is, compare the idea in the paper with your idea along different dimensions. Create and fill new comparison tables such as the ones in Q4b). If you have selected only three dimensions in Q4b, do comparisons along the same dimensions here.

What exact problem(s) is being addressed?	DIMENSION 1
	Paper i
	Paper ii
	Paper iii
	Paper iv
	Paper v
	Paper vi
	My idea

What are the details of the solution? Include details such as: For instructional strategies: <ul style="list-style-type: none">• What is the setting (classroom/ online/ blended/ other)?• What is the domain?• Is it a computer-based strategy?• What is the duration of the treatment? For the development of tools: <ul style="list-style-type: none">• What is the setting for the use of the tool?• What are the main modules in its implementation?• What all testing has been reported? For the analysis of data: <ul style="list-style-type: none">• What is the setting or context in which the data collection is carried out?• What criteria were used to select the dataset for analysis?• What are the main variables or features considered in the analysis?• What statistical or analytical methods are employed in the data analysis?	DIMENSION 2
	Paper i
	Paper ii
	Paper iii
	Paper iv
	Paper v
	Paper vi

	My idea
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For instructional strategies: <ul style="list-style-type: none"> What does the instructor do? What do the students do? For the development of tools: <ul style="list-style-type: none"> What does the user have to do? What does the tool do automatically? 	DIMENSION 3
	Paper i
	Paper ii
	Paper iii
	Paper iv
	Paper v
	Paper vi
	My idea

What educational theory* is the strategy/tool in the paper based on?	DIMENSION 4
	Paper i
	Paper ii
	Paper iii
	Paper iv
	Paper v
	Paper vi
	My idea

What is the research design for the study? What experiments have been performed to evaluate the strategy/tool? What scientific/statistical measures have been used to validate the analysis?	DIMENSION 5
	Paper i
	Paper ii
	Paper iii
	Paper iv
	Paper v
	Paper vi
	My idea

What is being measured? How is it being measured?	DIMENSION 6
	Paper i
	Paper ii
	Paper iii
	Paper iv
	Paper v
	Paper vi
	My idea

What evidence is collected? Give examples.	DIMENSION 7
	Paper i
	Paper ii
	Paper iii
	Paper iv
	Paper v
	Paper vi
	My idea

Q6. What gap does your idea address?

Your goal is to synthesize your answers to Q4 and Q5, to identify the gap in related work.

a) List the parameters along which your work is different from existing work. For example, check if you have differences in instructional setting (e.g. in-class or online), characteristics of students (e.g. middle school or college-level), instruction method (e.g. physical or computer-based), duration of the treatment (one class or semester-long) and so on. For tools, check if you have differences in technology used, degree of automation, ease of use and so on.
(Note that these are merely examples, you should attempt to find various such parameters)

Answer to Q6.a.

b) Pick the three most important differences. On the basis of these differences, write a paragraph (100-120 words) that explains how your solution builds upon or is different from existing work.

Answer to Q6.b.

For guidelines on positioning your work well, see Criteria C, Page 9 (Part A) in [TR-ET-2013-01.pdf](#).

Note: If you are unable to clearly identify a gap, there is a problem with your idea itself. You will not be able to conduct a meaningful research study based on it and your paper will be in danger of being rejected. Hence, you need to read literature and come up with a more novel idea for your research study. Go back to Q1, and revise your answers to Q1-Q6.

End of Resource: *Idea-Proposal-Template*
