



# **Your Psychology Project: The Essential Guide**

## **Choosing a Topic and the Research Proposal**

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Book Title: Your Psychology Project: The Essential Guide

Chapter Title: "Choosing a Topic and the Research Proposal"

Pub. Date: 2007

Access Date: April 9, 2019

Publishing Company: SAGE Publications Ltd

City: London

Print ISBN: 9781412922326

Online ISBN: 9781446213667

DOI: <http://dx.doi.org/10.4135/9781446213667.n3>

Print pages: 21-34

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# Choosing a Topic and the Research Proposal

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## Objectives

On reading this chapter you should:

- understand the importance of choosing a research topic that lends itself to a 'do-able' project;
- be able to evaluate potential topics;
- be able to formulate a valid research question (and hypothesis);
- understand the importance of creativity, and its relationship to innovation in formulating your research question;
- understand the integral role played by the research question;
- understand the vital role of the research proposal;
- be aware of the common pitfalls to be avoided in writing a successful proposal; and
- be able to write a logical and persuasive research proposal.

## Overview

*Chapter 3 deals with the practical issues of choosing an appropriate topic for your research project, and with the all important task of developing a research proposal. [Section 3.1](#) deals with the practicalities of evaluating topics from your potential list, in order to choose the most appropriate for your project. [Section 3.2](#) focuses on how to formulate a good research question. The role of the research question and different types of questions are dealt with in [Section 3.3](#). [Section 3.4](#) highlights the functional importance of the research proposal, which is often neglected by undergraduate students. The proposal acts as an exercise in thought, a reference point for supervision, and also as a motivational device. [Section 3.5](#) deconstructs the proposal into its major components in order to make the development of the proposal more manageable. [Section 3.6](#) presents the issue of the writing style of the proposal. [Section 3.7](#) looks at some common pitfalls in developing a good proposal, while [Section 3.8](#) provides a checklist for developing your research question and proposal.*

## Choosing a Topic

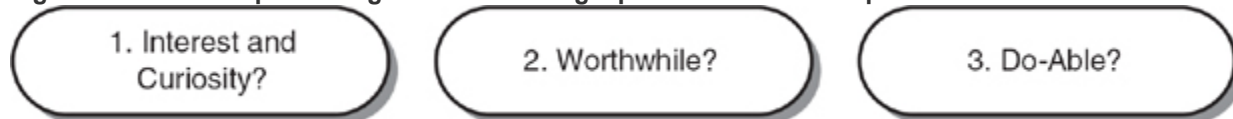
Often students adopt idealistic goals for their psychology project, due to the competition for good grades and for postgraduate places. You may want to make a significant contribution to the psychological literature, or you may want to publish your work; these are both very important and useful goals, but they should not override the importance of a 'do-able' project.

Often students want to research very broad, all-encompassing topics. Such broad topics involve more time and effort than most undergraduate psychology students can afford. However, topics that are too narrow should also be avoided as it is very difficult to generalise such results. You must strike a balance; your topic should be narrow enough to focus your project but not too narrow that the results have no generalisability. Also, your topic should be broad enough to generalise but not to the extent that you cannot manage the area and your project.

### Simple Strategies for Evaluating Potential Research Topics

It is quite common for undergraduate psychology students to develop a list of potential research topics. The difficulty arises when students must choose a topic from their list, and develop a research proposal. Often students ask me if they can submit two or three proposals, with the hope that I will inform them of the best idea and therefore make the decision for them. Supervisors are generally not in a position to do this, as it is unethical for anyone but the student to make this decision – this decision-making is, in itself, part of the research process. The following are three very essential questions that you can ask yourself regarding your potential research topics, as illustrated in [Figure 3.1](#).

**Figure 3.1 Three simple strategies for evaluating a potential research topic**



*Does the Topic Elicit Interest and Curiosity in You?*

The first decision you should make regards how you actually feel about the topics on your list, and whether you could stick with the topic through to the completion of a research project. It is very important that the topic you choose is of interest to you and that it also elicits curiosity within you. Your interest and curiosity should manifest themselves by adding to your enthusiasm about your project, and therefore have the potential to act as a powerful motivational device.

*Is the Topic Worthwhile?*

It is very important that you pick a topic that is worthwhile. As already noted in [Chapter 2](#), poor science is unethical. It is unethical to ask people to participate in your study if it has little or no likelihood, because of poor conceptualisation and design, of producing meaningful results or furthering scientific knowledge.

If your topic is not worthwhile, not only is it unethical, but you are also failing to satisfy the requirements of meaningful results with theoretical and practical implications. Hence, you will fail to meet the full requirements for an undergraduate project in psychology, and you will ultimately lose precious marks. If the examiner of your project reads your project and thinks ‘Well, so what?’, then you have not met the full requirements of your psychology project. It is important to note that it is your responsibility to come up with valid topics that are worthwhile. Your supervisor’s role is to guide you through the research process, not to generate topics for you.

*Is the Topic Do-Able?*

As recently noted, it is of paramount importance that the topic for your project is feasible. You must make critical decisions regarding whether you will be capable of collecting primary data to answer your potential research question. For example, students are often interested in topics related to psychopathologies, such as schizophrenia or multiple personality disorders; however, at undergraduate level, it is not appropriate or permissible to gather information from such a sample, due to the code of competent caring for example.

A topic that Irish students are often interested in is the prison service. They may want to investigate inmates’ quality of life, or they may be interested in the prison staff. At undergraduate level, students have great difficulty in gaining access to such sensitive samples, regardless of the aims of their study. Some students, due to family connections, etc., go through the process of getting permission to get into such places, and can spend

numerous weeks waiting for a response, which is usually 'no'. Precious time is lost, which would have been saved by making critical decisions as mentioned above.

It is also important to decide whether you would have enough time to gather the information and carry out your analyses. Undergraduate students, for example, often do not have the time or resources to invest in participant observation studies, and should settle for some other method of inquiry that suits their research goals. Once you have narrowed down your list of topics, the next step in setting down the foundations for a successful psychology project is to develop your research question.

## How to Formulate a Good Research Question

### Idea Generating

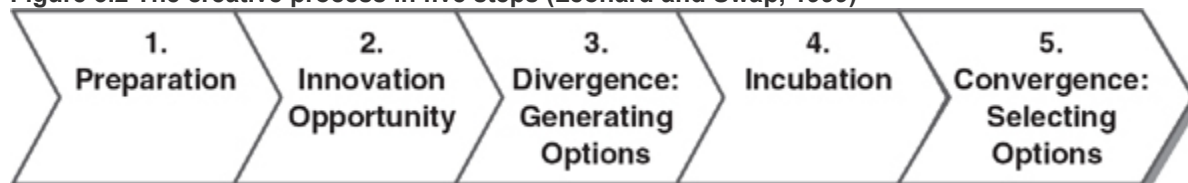
As already noted, all research begins with an idea, which can be the most difficult stage of the research process. Leonard and Swap (1999) define creativity as a process of developing and expressing novel ideas that are likely to be useful. Creativity is very important in considering the process of generating hypotheses for your psychology project, because generating your research question, like generating knowledge, is a creative act (Vicari & Troilo, 2000).

Generating a new idea is the beginning, not the end, of the creative process. Novelty for its own sake may result in nothing more than an intellectual exercise. Creativity is therefore an essential part of innovativeness, the starting point of a process which when skilfully managed brings an idea into innovation, (Leonard & Swap, 1999). Creativity is the process of imaginative thinking (*input*), which produces new ideas (for example the research question and hypothesis) while innovations are the *output*, in this case the completed psychology project.

Popper (1959) notes that there is no logical path leading to new ideas – they can only be reached by 'em-fuehlung', i.e. creative intuition. However, it is important to note that creativity is more than just dreaming up grand ideas, insights and problems; the solutions to these problems must be original and feasible. This again highlights the importance of a do-able project in developing a research question where the solution is in fact feasible.

Leonard and Swap (1999) propose five steps that capture the essential features of the creative process, as seen in [Figure 3.2](#).

Figure 3.2 The creative process in five steps (Leonard and Swap, 1999)



It should come as no surprise that creativity comes from a well-prepared mind and so *Stage 1* of the process is preparation. There also needs to be an opportunity for innovation to occur, which is *Stage 2* of the creative process. The generating of your research question is a prime example of a need to exercise creativity. *Stage*

3 involves the importance of generating as many initial ideas as possible. Creative ideas can begin with vague thoughts, and initial ideas can emerge in both scientific and non-scientific ways. In this early idea-getting phase, one should not be too critical of initial ideas because premature criticism might destroy an emerging good idea. The old saying rings through here – you shouldn't throw the baby out with the bathwater.

Cryer (2000) proposes numerous useful ways of generating options at this early phase in the creative process, as illustrated in [Table 3.1](#) below.

**Table 3.1 Strategies for generating creative ideas (Cryer, 2000)**

1.	Talking things over
2.	Keeping an open mind
3.	Brainstorming
4.	Negative brainstorming
5.	Viewing the problem from imaginative perspectives
6.	Concentrating on anomalies
7.	Focusing on byproducts
8.	Viewing the problem from the perspective of another discipline

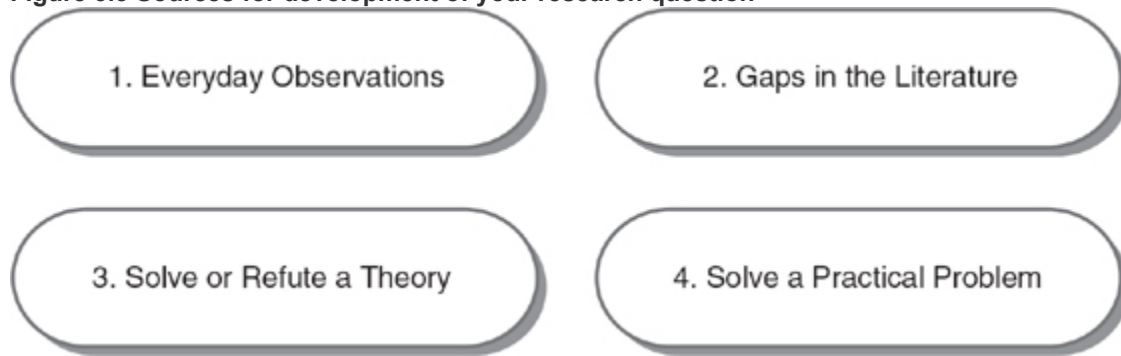
*Stage 4* of the process involves incubation: Leonard and Swap (1999) recognise the need for time out from struggling with an idea or issue. *Stage 5* involves selecting an idea from your generated list. Early ideas need to be nourished, thought about and taken seriously. Curiosity, interest and enthusiasm are critical ingredients. Once an area of interest is identified, it is useful to dive right in by reading articles and relevant books in the area.

#### Using the Research Literature to Generate Ideas

As already noted, ideas for your research project often come out of the research literature. At this early stage in the research process, students are often intimidated by the vast amount of information available, and sometimes find themselves lost amidst the literature fog. There are a number of ways to approach the research literature; you could select a small number of topics within psychology which are of interest to you, and investigate them in depth. For example, a researcher may have an interest in children's reasoning but no particular idea for a research project. The interest, however, is enough to point the researcher to an area within which more defined ideas can be developed. For the new researcher in particular, interest in the area to be studied is critical in helping to sustain the hard work to follow. Remember the point about curiosity helping to generate ideas and sustain effort.

Another strategy is to acquaint yourself with research at the cutting edge of psychological knowledge. This can be achieved by keeping yourself up to date with top journals dedicated to your area of interest. For example, if your area of research is memory, it would be important to check each new issue of *The Journal of Experimental Psychology: Learning, Memory and Cognition*. A final strategy is to start with general readings such as the *Annual Review of Psychology*, and progress to more specific journal articles. Research questions can also develop from finding gaps in the literature, by attempting to refute or prove an existing theory, through everyday observations of behaviour, or from the need to solve a practical problem, as illustrated in [Figure 3.3](#).

Figure 3.3 Sources for development of your research question



## Clarifying and Refining Your Research Question

The next stage involves clarifying and refining your ideas into research questions, as vague ideas are insufficient in psychology as a science. This process usually involves examining the research literature, in an attempt to learn how other researchers have conceptualised, measured and tested the concepts that are of interest to you and related to your ideas. While reviewing the literature, you will continue to work on your ideas, clarifying, defining and refining them, until you have produced one or more clearly posed questions based on a well-developed knowledge of previous research and theory, as well as on your own ideas and speculations.

The research question plays a vital role throughout the research process. It is vital that you present a clear statement of the specific purposes of your study. The research question simply formulates this specific purpose as a question. In writing the introduction section of your research project, your review of the literature must be defined by your research question which acts as the guiding concept.

Careful conceptualisation and phrasing of the research question is of paramount importance, because everything done in the remainder of the research process is aimed at answering your research question. The question that you develop might involve highly specific and precisely defined hypotheses typical of quantitative research. Or it might be phrased in a much more general manner typical of qualitative research. To a large extent, the research question that is posed will dictate the way you conduct the rest of the research process. This crucial aspect cannot be stressed enough: remember that throughout the grading of undergraduate projects, one fundamental issue is addressed when reading each section of the research: was that appropriate for the research question being asked? Students often fail to see this cardinal relationship at the early stages of the project, which can cause difficulties later on in the process.

### Different Types of Research Questions

During this early stage of the research process, one works from the general to the specific using rational and abstract processes to systematically develop ideas towards valid research questions. In successfully asking questions, a very important requirement must be met. The question must be answerable with data; without this crucial caveat of testability, research questions are nothing more than a speculation.

Meltzoff (1999) illustrates that there are a number of different types of research questions that call for different methods of inquiry in seeking answers. [Figure 3.4](#) illustrates these different types of research questions.

Figure 3.4 Different types of research questions (Meltzoff, 1999)

**1. Existence Questions**

Example: Is there such a thing as the unconscious?

**2. Descriptive and Classification Questions**

Example: What are the personality characteristics of parents who slap their children?

**3. Comparative Questions**

Example: Are males better at mental rotation than females?

**4. Composition Questions**

Example: What are the factors that make up intelligence?

**5. Relationship Questions**

Example: Is body image related to self-esteem?

**6. Causality Questions**

Example: What are the effects of exercise on reaction time?

**Evaluating Your Research Question**

One of the biggest difficulties for undergraduate students, at this stage of the research process, is that they are unsure whether their idea and research question are good enough, and whether they meet the requirements of originality and significance. If you have been having such feelings of doubt and uncertainty, you are certainly not alone. Originality can be achieved in a number of ways. First of all your research question can be original, or you may design your methodology in an original fashion, and finally your solution or answer to your research question may be original. Originality also arises from solving gaps in the literature, or by finding evidence for or against an existing theory using a novel or new method of inquiry. Originality can also arise from solving a practical problem in a new way, or a practical problem that did not have a solution.

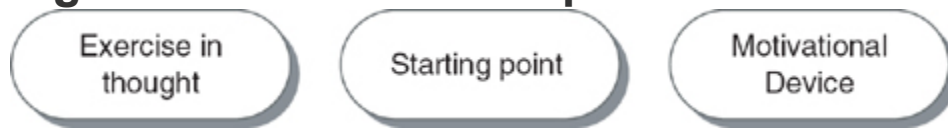


Significance refers to whether your idea and research question are worthwhile. As already noted, in order to be worthwhile your research question should yield valid and meaningful results or findings, which will add to the existing knowledge base in psychology. The thought processes involved in developing your research proposal can aid in determining whether your research question is original and significant.

## The Role of the Research Proposal

Your research proposal describes what your proposed research is about, what it is trying to achieve, how you will go about achieving it, what you find out and why it is worth finding out (Punch, 2001). Often undergraduate students under-estimate the importance of the research proposal, and fail to see the vital functions that it serves. This section highlights the functional importance of the research proposal, as seen in [Figure 3.5](#).

### Figure 3.5 Functional importance of the research proposal



#### An Exercise in Thought

The research proposal serves a number of useful functions. The most pertinent is that it helps you to think through each step of your research project. By writing the proposal you essentially have the opportunity to try out ideas, be creative and explore alternatives, without recruiting a single participant. If you have a few ideas for your psychology project, you can write up a proposal for each one, and compare and evaluate them, to help you choose the most viable idea. This useful writing process also helps you make intelligent and ethical research decisions.

#### Starting Point for Supervision

The research proposal can serve as a very effective reference place for your supervision. The proposal also allows your supervisor to think through your research plan so that they can give advice that will improve your study. On the other hand if your supervisor is unsure of your research focus, or of the relevance of your research question, a well-written proposal allows them to make a more concrete informed decision regarding its approval. Remember that a well-written research proposal could convince your supervisor that your research is worthwhile, and that you have the competence to carry it out.

#### Motivational Device

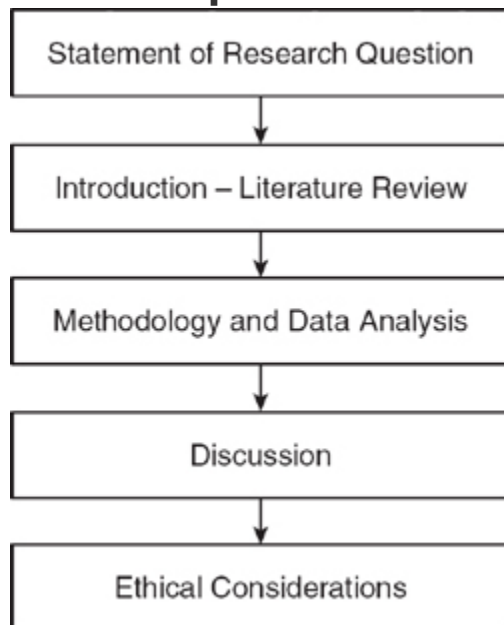
The research proposal can also help you stay on the right track, and act as a powerful motivational device. The undergraduate research project is a timely endeavour – once you have embarked on this journey, it is possible to lose track or become disheartened. Returning to the proposal can remind you of the potential contribution your project could make to psychology as a science, and to the practical applications that could ensue. [Chapter 5](#) deals with motivation and your psychology project in more detail.



## The Research Proposal Deconstructed

Undergraduate students often find the development of an effective research proposal for quantitative and qualitative projects an exasperating and difficult experience. This section deconstructs the proposal into its major components, as seen in [Figure 3.6](#), in order to make the development of the proposal more manageable and practical.

### Figure 3.6 Components of the research proposal for both quantitative and qualitative research (Note: not all universities require a discussion section)



#### Statement of the Research Problem

It is vital that you present a clear statement of the specific purposes of your study. It is important that you also explain, very clearly, why your research question is worth answering. What do you hope to learn from it? What will this new knowledge add to the existing field? What new perspective will you bring to the topic? For quantitative research you must also very explicitly state your hypothesis(es). This is the tentative prediction of the answer to your research question. Sometimes students assume that their hypotheses are obvious, and do not state them. This is a major mistake, which should be avoided at all costs. No matter how obvious your hypotheses appear, it is imperative that you state them. Clear hypotheses are very important, as the rest of the quantitative research process is geared towards establishing confirmation of them.

#### Introduction – Literature Review

The literature review is generally incorporated into the introduction. The main purpose of this section is to provide the necessary background or context for your research problem. The framing of the research question is the most crucial aspect of the research proposal. If you frame your research question in the context of a general long-winded literature review, the significance of your research question could ultimately be lost and appear inconsequential or uninspiring. However, if you frame your research question within the framework of a very focused and current research area, its importance will be markedly apparent.

The literature review demonstrates your knowledge and understanding of the theoretical implications of your research question. It demonstrates your ability to critically evaluate relevant research, and illustrates your ability to integrate and synthesise information. Try to outline conflicting research in the area that your project will try to resolve. Most importantly, the literature review convinces your supervisor that your proposed research project will make a substantial contribution to psychology as a science. For the reasons mentioned, even qualitative proposals require a literature review; however, you need to strike a balance between adequate knowledge to focus your study, and immersing too much in the literature that your study becomes too contaminated with prior expectations. This idea is dealt with in more detail in [Chapter 8](#).

## Methodology

Your methodology is very important because it illustrates how you plan to answer your research question. It acts as a work plan and describes how you will complete your project. It is crucial that you include sufficient information for your supervisor to ascertain if your methodology is sound and demonstrates scientific rigour. Quantitative and qualitative methodologies do not lend themselves to the same description and will therefore be dealt with separately in more detail in [Units 2](#) and [3](#) of the text.

### *Quantitative Methodology*

*Design* – What are your independent variable(s) and dependent variable(s)? It is very important that these are operationally defined, using precise and concise language. Also mention how you propose to measure them. What type of design do you propose to answer your research question(s)?

*Participants* – How will you choose your sample? Do you foresee any difficulties accessing this sample? Are there any limitations to using such a sample?

*Materials* – Describe the type of equipment and materials you plan to use.

*Procedure* – Explain, in as much detail as you can, how you propose to conduct your research.

*Statistical considerations* – Although you have no results as yet, it is important that you demonstrate an understanding of the statistical analyses that will answer your research question. It is imperative that you suggest procedures that are appropriate considering the type of design you propose to utilise and the type of data that you will collect. For example, if you are comparing two different groups, and have proposed an independent groups design, then, if it is interval/ratio data, an independent t-test would be appropriate, but if the data was categorical, then a  $\chi^2$  would be appropriate to answer the research question.

### *Qualitative Methodology*

Silverman (2003) notes the importance of the theoretical underpinnings of the methodology chosen, and the contingent nature of the data chosen in qualitative research. Your research paradigm, for example grounded theory, should be included in your proposal. Explain the assumptions of your research paradigm.

Qualitative methodology should deal with a description of the cases chosen, the procedures for data collection and analysis in terms of their suitability to the theoretical framework applied and how they satisfy criteria of reliability and validity (Silverman, 2003). It is important to realise that in qualitative research, data collection and data analysis often occur simultaneously.

### *Discussion of Potential Findings*

It is important to note that not all universities require a discussion section in the research proposal. It is advisable that you check the policies of your university to ascertain whether this section is necessary. In my view, it is beneficial that you discuss the potential impact of your proposed research project. This can be communicated in a few sentences, the goal of which is to demonstrate to your supervisor that you believe in your project.

### **Ethical Considerations**

As already noted in [Chapter 2](#), planned steps must always be taken to protect and ensure the dignity and welfare of all your participants, and that inadequate attention for respect and beneficence can affect the scientific viability and validity of your proposed research. It is also crucial that you demonstrate an active concern for the well-being of your participants, by minimising potential harms and maximising the benefits of participating in your study. It is very important that all participants are volunteers, and have given informed consent to take part. It is also important to map out how you will uphold these ethical obligations.

## **A Note on Writing Style**

It is important to keep in mind that your proposal is an argument. An effective research proposal, therefore, should be clear and precise, be persuasive and convincing, and demonstrate the broad implications of the research (Silverman, 2003). One of the benefits of viewing your proposal as an argument is that such a structure pushes you to stress your thesis or line of thought. This structure also requires that your arguments and statements are consistent with each other. One of the main aims of the popular writing and publication formats is clarity of communication. This very much parallels with the principle of parsimony, which is applied to science in general. Cryer (2000) proposes that the research proposal should use language and terminology that is understandable to an intelligent lay person as well as to a subject matter expert.

Silverman (2003) warns that you should never be content with a proposal which reads like a stream of undigested theories or concepts. It is crucial that you use precise and concise language that a non-specialist can understand. By explaining all relevant concepts and variables, you will have demonstrated the ability to write and think clearly and critically. Remember that your research proposal is your supervisor's best way of getting a sense of your thinking, and it illustrates that your research project itself will be organised in the same logical way. Morse (1994a) highlights the importance of a well-thought-out proposal in noting that a sloppily prepared proposal sends the message that the actual research itself may also be sloppy. It is very important that you are convincing of the practical importance of your research project, and that you develop a sufficient contextual basis for your research problem.

## **Common Pitfalls**

Students often have difficulty in writing a research proposal that gains the support of their supervisor and their university's ethics review board. The following are some common mistakes made in proposal writing.

1. Vague presentation of your research problem.
2. Framing your research problem within a long-winded literature review.

3. Failure to demonstrate the significance of your research proposal.
4. Vague methodology and proposed handling of your results.
5. Inadequate consideration of ethics for psychological research.
6. Poor writing style which lacks clarity and precision.

## Checklist

- Does your research question address an original and significant psychological phenomenon? 'An original contribution to knowledge' does not mean that it must explore a new problem; it can also result from a novel reassessment of a familiar question.
- Is your research question clear?
- Can your research question be answered by data?
- Have you developed a clear, persuasive and comprehensive research proposal that will guide you through the research process?
- Is your research question consistent with each aspect of your proposal?
- Does your proposal explain the logic behind your proposed investigation as opposed to merely describing it?

## Summary

There are some simple strategies for evaluating potential research topics, for example deciding whether a topic elicits your interest and curiosity, whether the topic is worthwhile to investigate and whether it is feasible. Creativity and innovation are important in generating a valid research question. Creativity can be viewed as the process of imaginative thinking (*input*) which produces new ideas, while innovations, in this context your research question and your psychology project, are the *output*. The research literature is also important in generating ideas. The careful conceptualisation and phrasing of the research question is critical, as everything done in the remainder of the research process is aimed at answering that question.

The research proposal acts as a useful exercise in thought, allowing you to think critically through each aspect of the research proposal and to make necessary ethical decisions. The research proposal also serves as a very effective starting point for supervision, and also acts as a powerful motivational device. Both qualitative and quantitative research proposals can be broken down into the statement of the research question, the introduction-literature review, methodology and data analysis, discussion and ethical considerations. There are a number of mistakes often made by undergraduate students, from hazy presentation of the research problem, to poor writing style. A clear, precise and persuasive writing style is critical in demonstrating the practical and theoretical significance of your project, and in demonstrating your ability to think and plan in a logical, rigorous manner.

## Further Reading

- Cryer, P. (2000) *The Research Student's Guide to Success*. Buckingham: Open University Press. (Aimed at post-graduate level. Details useful creative strategies.)
- Punch, K. F. (2001) *Developing Effective Research Proposals*. London: Sage Publications.
- Silverman, D. (2003) *Doing Qualitative Research: A Practical Handbook*. London: Sage Publications.

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