

STUDY SKILLS IN
EDUCATION



Critical Thinking Skills for Education Students

Second edition

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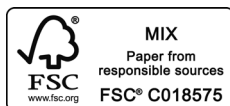
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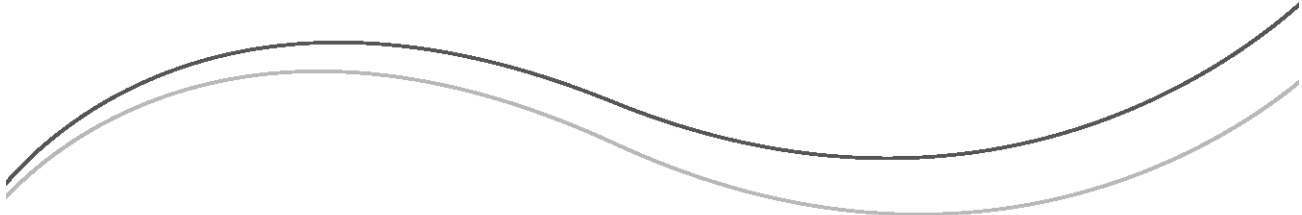
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5. Developing your critical thinking skills: reading critically

Introduction

In this chapter we are going to look at the skills you need to practise, which will help you become a good critical thinker. Like every part of your body, your brain improves with exercise and two ways in which to do this are through reading and writing critically. We are going to look at how to read the resources you find, how to analyse and evaluate them and how to organise them.

Now, I suspect you are thinking, *I'm at university – I don't need to know how to read*. However, what we are talking about here is reading for a purpose. If you are to be a good critical thinker, you need to know how to find appropriate sources of information, how to judge their validity and how to determine if they are authoritative or not. So, in this chapter we are going to think about reading for a purpose.

Learning outcomes

By the end of this chapter you should know how to:

- decide which resources are relevant to your problem/issue/question;
- analyse what you read and gain from it the relevant information and understanding;
- record the process and information obtained for further analysis/reference.

Developing your critical thinking skills: reading critically**Reading for a purpose**

We talked in Chapter 3 about finding resources, using various search tools and repositories and how your librarian can help you with these tasks. Now we are going to consider what we do with the resources we find in this way.

Practical task

Think of a question relating to a topic you wish to explore – it may be related to an assignment you have to perform or it may just be something in which you are interested, for example:

- *How are numeracy skills taught in preschool?*
- *How does gaining a BTEC impact on a student's chance to enter university?*
- *What is authentic assessment and how is it used in higher education?*

You may think of any question you wish, but this will be your search question.

Now think of the keywords or search terms which you will use to help find relevant sources of information.

OK, that done, now let's start searching.

From your search results, choose five resources that you think are most important and write down what they are, why they are the most important and how you made that decision. We'll revisit this after the next section.

Identifying relevant resources

Once you have identified a set of resources through using your chosen search terms, you need to make a judgement about their relevance to your question: the authority of the source (i.e. has it been written by an enthusiastic amateur or someone who has an established reputation in the field?); the validity of the source's message or conclusions (i.e. is it based on false premises? Is the writer using rhetoric to persuade?); and the methods

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used to gain data/results/outcomes upon which the source is basing conclusions (i.e. are they appropriate and valid?).

This sounds daunting but there are some straightforward measures you can apply to help inform your judgement.

First of all, read the title of the article. Does it sound as though it may have a direct bearing on the research question you are trying to answer? If yes, then go further. If you are not sure, also carry on. You can eliminate sources at any stage of the following scheme.

Next, take a look at the abstract (if one is present). It will give you more information than the title alone and will help you to decide if the article is really relevant to your study. It should give you information about the study population, the methods used, the main outcomes and conclusions. For example, if you are only interested in ethnographic studies, then the methodological details in the abstract should allow you to include or eliminate the study.

Now look at the source itself. Some of the questions you might ask are as follows.

- Is it published by a reputable academic publisher?
- Is it published in an established peer-reviewed journal? (This means the journal has been around for some time and papers are sent to experts to review before being accepted.)
- Is it from another reputable source such as a professional body, university website or government website?

If none of the above applies, it doesn't mean you can't use it – you just have to be particularly thorough when analysing the resource. Sometimes, leading experts in their field may set up project websites or blogs to give the public instant access to their latest findings. So you also need to check the authors.

- Who are they?
- What are their credentials?
- Has their work been cited by others?

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Again, coming up blank against all these queries does not stop you making your own judgement about a source of information. Just remember to look at how authors have derived their data.

- Has the resource been well cited (referred to) by others?
- Have they used appropriate/known methodologies?
- Have they used appropriate methods?
- If they have used tools such as questionnaires or interviews, have these been appropriately designed? Do you have access to them?
- Have they used appropriate tools to analyse their data?
- Are their conclusions logical and based on appropriate premises?
- Have they described the limitations of their study so that their conclusions can be appropriately interpreted?

Some or all of the above questions may be relevant to your evaluation of the literature. You can simplify the process by having a list of the questions and just ticking off which ones your resource satisfies. You then need to decide which are most important in your given circumstances and on the basis of this you can accept or reject the resource in relation to your study. For example, if you are doing a review of the literature to answer the question 'What is the current state of our knowledge in relation to the effectiveness of simulation in clinical education?', then there may be some very important secondary sources that would not meet all the criteria in relation to data collection but would still be important for your literature review if this were a well-cited (well-known) article in the field. (Primary sources of information are those that report the collection and interpretation of new data such as a research paper. Secondary sources of information are those that draw on the results of others to form novel interpretations and to generate new knowledge, e.g. review papers, reports, and provide their interpretation of the work of others which they cite (reference).)

When you have decided that the paper is relevant to your own study, then you need to record all the information (authors, title, year of publication, where published), preferably using a reference manager. (A reference manager may be as simple as a card index system or an Excel spreadsheet. However, sophisticated e-programs are available that automate much of the process of appropriate referencing and data management. Examples include Refworks, Endnote and Zotero.)

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You should also take a note of the date you accessed the article, the search terms you used to find it and the search engine/databases you used. Finally you should take notes of the key information you are deriving from the article, why you think the work is valid and what element of your own argument this is supporting. If you think there are important quotes you will wish to use you should carefully take a note of them and the pages on which they occur. All of this information can be stored in a spreadsheet or in your reference manager software for future use. You may also want to make a note of the key premises/data on which any conclusions are based so that when you return to your notes, you will be able to judge the validity of any arguments presented. This is particularly important when you have contradictory evidence from two or more different sources. Once you have collected all this information you need to know how to put it together to support your views/arguments in relation to the question/issue you are seeking to address. We'll look at this in the next chapter.

Practical task

Now revisit your previous search and choose the five most important references using the approach described above. Has this changed your top five?

Summary of key points

One way to develop your critical thinking skills is to practise them. You can do this in a number of ways but one way is to search for information relevant to a particular problem or question you are addressing and to analyse and evaluate that information. It is important to question everything and because there is so much information out there, it is important to have a rubric/system that you can use to decide whether or not something is relevant to your problem/question and whether or not it is valid. You may like to do this by creating a pro-forma checklist that you can complete for each article or information source you evaluate.

Another way to develop your critical thinking skills is through writing. Visualisation of your thoughts and argumentation laid out in a structured way can help you see how your skills are progressing. We shall address this in the next chapter.

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References and further reading

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