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Research Methodology
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Master

Lecture 2: The Significance of Critical Reading in the Landscape of Educational Research

Content:

Objective: By the end of this lesson, students will be able to critically evaluate research materials, identify key arguments, assess the quality of evidence, and synthesize information effectively.

Introduction

To develop a strong research output, whether it is a research paper, project, thesis, or dissertation, researchers need skills that enable them to critically engage with existing literature, identify gaps in knowledge, analyze current trends, and develop new perspectives or solutions. All these processes begin with honing critical reading abilities, which empower researchers to selectively engage with academic texts, question information, and propose solutions to issues they identify. A fundamental skill for any researcher is the ability to approach information with a critical and analytical mindset, laying the foundation for meaningful contributions to their field.

Critical reading involves interpreting an author's work to extract meaning, but it goes beyond basic comprehension to assess the validity, credibility, sincerity, and completeness of the material. A critical reader actively questions what is read, analyzing the purpose, tone, and argument of the text rather than passively accepting information. This skill requires an awareness of one's own knowledge limitations and an openness to evaluate ideas critically.

In educational research, which evolves to reflect and support the progress of education, critical reading is essential. Without a foundation in both education and critical reading, research lacks value. The purpose of educational research is diminished if individuals cannot engage thoughtfully with existing literature, question findings, or develop original insights. In academic and professional settings, the ability to read critically enables individuals to participate meaningfully in discussions and innovations, rather than simply echoing others' conclusions. Consequently, critical reading and thinking skills are crucial for academic integrity and professional development, especially given that a minimum of thirty percent of exam content typically involves critical thinking.

1-Critical Reading

Critical reading refers to a process of reading that involves critical thinking. To fully understand critical reading, it is essential to first grasp the concepts of reading and critical thinking.

A-Reading "does not involve simple decoding of the printed word, but rather that meaning is created by readers in their interaction with the text" (Widdowson, 1979 in Alcantara et al., 2003, p. 14). Thus, readers derive meaning from a text by combining their prior knowledge with the information provided in the text itself.

There are three key reading perspectives for both L1 and L2: structural, cognitive, and metacognitive.

1. **Structural Perspective** emphasizes decoding written symbols to derive meaning, focusing on linguistic skills but overlooking the role of context in comprehension.
2. **Cognitive View** highlights the importance of background knowledge and schema development for interpreting texts, with challenges arising when such knowledge is lacking.
3. **Metacognitive Reading** involves self-awareness and strategy use, where skilled readers actively monitor and adjust their understanding, combining textual and background knowledge to construct meaning. (Liaw & English 2017).

B-Critical thinking is the logical analysis and evaluation of information, involving reasoning, questioning assumptions, and considering alternatives to make informed decisions and solve problems, rather than merely accepting or memorizing information. According to the National Council for Excellence in Critical Thinking, (as articulated by Michael Scriven and Richard Paul, 1987), critical thinking is "the intellectually disciplined process of actively and skilfully conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action". Cottrell (2005, p. 1) defined critical thinking as a "cognitive activity associated with using the mind," emphasizing mental processes such as attention, categorization, selection, and judgment. Richards and Schmidt (2013, p. 147) argued that critical thinking is "a level of reading comprehension or discussion skills when the learner is able to question and evaluate what is read or heard," engaging students more actively and encouraging deeper processing of materials in the target language. Ennis (1987, as cited in Cottrell, 2005) and Wallace and Wray (2011) expanded on this definition, emphasizing the importance of reflective skepticism and reasoned thinking. In this context, skepticism is characterized not by disbelief, but by a "polite doubt," prompting individuals to remain open to the possibility of incomplete knowledge. Critical thinking provides practical tools for analysis and informed decision-making, allowing individuals to apply a methodical approach to various ideas and problems. It is not a personality trait but a flexible methodology that can be adapted by individuals with different levels of skepticism or trust.

Critical reading involves using critical thinking skills to evaluate a text's logic, relevance, and fairness. It means actively questioning a text by asking, 'Is this logical?' 'Is this relevant?' and 'Is this fair? The ability to critically read is a skill that needs "the ability to recognize, comprehend, apply, analyse, synthesize and evaluate written texts in an open-minded, logical and rational manner" (Abdullah, 1998, p. 33). Critical reading is "reading in which the reader reacts critically to what he or she is reading, through relating the content of reading material to personal standards, values, attitudes or beliefs, going beyond what is said in the text" (Richards and Schmidt, 2013, p. 146). One thorough and clear definition is given by Priozzi (2003)

> Critical reading can be defined as a very high-level comprehension of written materials requiring interpretation and evaluation skills that enable readers to separate important from unimportant information, distinguishing between fact and opinions, and determine the writer's purpose and tone. (p. 325).

For Wallace and Wray (2011), critical reading is about being skeptical to examine how the author can justify his or her argument or if the reader knows more about a given topic. Your own

expectations, biases, and prior knowledge inevitably influence how you interpret the literature. It is also essential to recognize that authors bring their own assumptions, beliefs, and biases, which can shape your understanding of their work. Wallace and Wray (2011) further argued that "a key critical reading skill is that of identifying authors' underlying aims and agendas, so that you can take them into account in your evaluation of the text in hand". Added to this, being a critical reader means looking for reasons why we should not just accept what we read as the absolute truth. This means that you are required to identify weaknesses and problems in an author's arguments or even methods. Of course, highlighting inadequacies in a piece of writing is not enough and you are, hence, expected to suggest alternative ways in which an argument or a claim can be improved. This is referred to as constructive thinking. Constructive thinking means finding problems and indicating ways of bettering a piece of research.

Many researchers gave diverse descriptions on approaching critical reading proficiency and assure that there is a necessity for systematic explicit teaching aimed at improving students' critical reading abilities. For example, Wallace and Wray (2011) recommended five questions to gauge students' critical reading. These five critical synopsis questions are as follows:

1- Why am I reading this?
2- What are the authors trying to do in writing this?
3- What are the authors saying that is relevant to what I want to find out?
4- How convincing is what the authors are saying?
5- In conclusion, what use can I make of this?

The nine core critical reading subskills, ordered by increasing difficulty, include the ability to:

- Identify similarities and differences;
- evaluate inductive inferences;
- identify facts and opinions;
- evaluate generalisations;
- evaluate strengths of arguments;
- identify biased statements;
- identify relevant and irrelevant materials;
- identify author's motives;
- and recognise hidden assumptions (Abdullah, 1998, p.).

Ultimately, while critical reading and critical thinking are distinct in focus, they are interdependent. The analytical skills of critical thinking support the depth and rigor of critical reading, and in turn, critical reading reinforces critical thinking by cultivating the careful examination of ideas, arguments, and evidence. Together, they provide essential tools for navigating and understanding complex information. In short, "Critical reading is a technique for discovering information and ideas within a text. Critical thinking is a technique for evaluating information and ideas, for deciding what to accept and believe" (Kurland 2000).

2- How to Evaluate an Author's Argument and Evidence?

1- **Focusing Through Central and Review Questions**

To become a critical reader, one effective strategy is to frame your reading around a **central question** that guides your inquiry, especially when working with multiple texts. This broad question helps keep your focus on a specific issue. For example, a central question might be: *"How does social media affect teenagers' self-esteem?"* If the title is not phrased as a question,

you can reframe it, such as changing *"The impact of social media on teenagers' self-esteem"* into a question format to stay focused. Additionally, **review questions** are more specific questions that emerge from the central question and help you analyze the details. For example, a review question could be: *"What studies show a connection between social media use and self-esteem in teenagers?"* or *"How do different social media platforms affect self-esteem differently?"* These questions help ensure your reading is purposeful and aligned with your research goals.

2-Evaluating the usefulness of what you read

Evaluating the usefulness of what you read involves assessing how relevant and reliable a text is for your purpose. Not all opinions are valuable, and extreme views should be approached cautiously. To determine a text's reliability, focus on its arguments, which consist of a conclusion and its warranting—the justification for accepting the conclusion.

OPINION = UNWARRANTED CONCLUSION

ARGUMENT = CONCLUSION + WARRANTING

The *conclusion* is only half of an argument. You can legitimately ask of any set of claims: 'Why should I believe this?' The other half of the argument is the *warranting*. The warranting is the reason for accepting the conclusion, including evidence for it. Demand a convincing warranting for every conclusion that you read about. Also, demand of yourself that every conclusion you draw is adequately warranted.

EXAMPLE OF ARGUMENT CONSTRUCTION

The following passage comes from a report of research into the quality and extent of training experienced by researchers employed on academic projects.

> For example, one practitioner researcher commented that 'I think that my TLRP [Teaching and Learning Research Programme] experience was very, very positive. It caused me to reflect back on where I was and to accept that I am really happy in FE [further education], that I don't want to be a lecturer in HE [higher education].' Building research capacity is not just about building the next cohort of professors and senior academics, it can also relate to the building of one's own personal capacity to engage with research and practice.

Source: Fowler, Z., Proctor, R. and Stevens, M. (2008) 'Mapping the ripples: an evaluation of TLRP's research capacity building strategy', *Teaching and Learning Research Briefing no. 62*. London: Teaching and Learning Research Programme. www.tlrp.org/pub/documents/fowlerRB62final.pdf

This passage constitutes one of many arguments in the report. The *claim* is in the final sentence: there is more to building research capacity than just making everyone a top expert; it is also about helping individuals to gauge their own potential and ambitions. The *warranting* is the quote in the first sentence, where a researcher reveals that the research experience resulted in a recognition of what sort of future work would be most comfortable for them. Quoting from a respondent is one kind of *evidence* that can be used in warranting. Since this study entailed on-line surveys with researchers and their project managers, quoting in this way is an appropriate form of evidence.

3- What makes an argument convincing

An argument becomes convincing when the claims in its conclusion are supported by adequate warranting—sufficient and appropriate evidence.

CONVINCING ARGUMENT	=	CONCLUSION (containing claims)	+	ADEQUATE WARRANTING (based on sufficient appropriate evidence)

The strength of warranting depends not only on the evidence itself but also on how it is interpreted by the reader. For instance,

> In the reading test, the five children who were taught to read using phonics performed better overall than the five children taught using the whole word method. This shows that the phonics method is a better choice for schools.

A critical reader evaluates whether the evidence provided justifies the conclusion. In this case, the critique highlights issues like the small sample size and mismatched subjects, suggesting that Browning's conclusion is not convincingly supported. However, when making counterclaims, the commentator must also provide sufficient warranting for their own conclusions. What Browning's claim illustrates is the drawing of a conclusion without

sufficient warranting. Here is the example reader's commentary

> Browning (2005) found that children taught to read using phonics did better in a reading test than children taught using the whole word method. However, the study was small, the test rather limited, and the subjects were not tightly matched either for age or gender. An examination of Browning's test scores reveals that, although the mean score of the phonics group was higher, two of the highest scorers in the test were whole word learners. Since this indicates that the whole word method is effective for some learners at least, Browning is perhaps too quick to propose that 'the phonics method is a better choice for schools' (p. 89).

The commentator critiques Browning's conclusion that phonics is the best teaching method, highlighting flaws such as a small sample size, limited testing, and mismatched subjects. They argue that Browning's evidence does not sufficiently support his claim, noting overlap in performance between groups, which weakens his conclusion. However, the commentator warns against making counterclaims without adequate warranting, as criticizing another's evidence does not justify rejecting their conclusion outright. Readers are encouraged to critically assess both the original study and commentary, as relying on secondary accounts can oversimplify findings. A convincing argument requires a conclusion backed by sufficient and appropriate evidence, though interpretations of adequacy may vary among readers.

4- Identifying the conclusion and warranting of arguments

Academic discourse connects conclusions and warranting using key indicators like *therefore, because,* and *since,* offering flexibility in argument formulation. For example, "studies should consider age and gender because girls mature faster than boys" can be expressed in different ways while maintaining its meaning. Variations may acknowledge the reliability of warranting in specific contexts, such as "in conditions where girls mature faster than boys." Additionally, readers and writers should identify incomplete or flawed arguments by questioning gaps in logic or evidence. These practices ensure clear, well-supported academic reasoning. Examples of incomplete or flawed arguments: In your reading (and your own writing) look out for incomplete arguments.

Table 3.1 shows some common flaws and the ways in which you can ask questions to identify where the problem lies.

Table 3.1 Identifying flaws in arguments

Type of flaw in an argument	Example (at the level of a few sentences)	Critical questions as a reader, suggesting there may be a flaw	Example resolution
Conclusion without warranting	The best musicians make the worst teachers.	Why do you think that? How do you know?	The eye for fine detail possessed by the best musicians tends to make them over-critical and discouraging with pupils (Goodman, 2009).
Potential warranting without a conclusion	Johnson's research shows that people often sign legal agreements without reading them. Legal documents can be difficult to read.	So what? What do these different pieces of evidence, together, imply?	People may fail to read legal documents because they are too difficult.
Warranting leading to an illogical conclusion	People in English-speaking countries tend not to know another language. This indicates that they are poor language learners.	Does this reasoning add up? Aren't there other more plausible conclusions?	This may suggest that English speakers do not see the need to know other languages.
Conclusion not explicitly linked to warranting	Statistics show that teenagers are drinking far too much to be good for their health. Alcoholic drinks should be increased in price.	What causal relationship between the factors are you meaning to suggest?	Since teenagers have only limited money, raising the price of alcohol might result in their drinking less.
Conclusion with inadequate warranting	Trainee managers learn more effectively when they are praised than when their efforts are criticized. In a survey of female trainee managers in a retail company, 77% said they liked to be praised.	Is the evidence adequate to justify the extent of the claim? Is the evidence appropriately interpreted?	However, males and females may respond differently to praise. Further, there is no evidence of a link between 'liking to be praised' and learning more effectively.

In short the researcher should look for the following when reading an academic text:

1. The researcher should read between the lines and look for the hidden agenda of the author.

2. The researcher should link what they read to what they already know about a given subject.

3. The researcher should see whether the argument of the author is supported by enough evidence.

4. The research should see whether the evidence that convinced the author also convinces them in the same manner.

5. The researcher should see whether the author has offered convincing answers or potential solutions to their proposed research problem.

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