

Serbia: Critical Thinking

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1. Introduction

a) What is critical thinking? What do you think it is?

b) A quick overview of the process as I see it

A person who undergoes good critical thinking -

- is involved in sustained deep thinking that involves analysis and / or comparison of situations/issues,
- challenges assumptions,
- will question, and will evaluate evidence or ideas fairly,
- is willing to listen to others,
- can argue a point but is open-minded and willing to change opinion,
- recognises the breadth and context of the issue and argues within a specified context,
- recognises the possibility that different people can see the same idea in different ways because of their different prior experiences,
- recognises that there can be multiple perspectives on an issue -
- and therefore does not necessarily seek absolute responses (ie not black or white; right or wrong; positive or negative answers or responses,
- is critical of her own processes of thinking (checking for her own assumptions, for example),
- is aware of the effects of emotion on the processes of thinking and can reasonably well manage her own emotions in the processes of critical thinking,
- can articulately and appropriately represent her thinking in speech or writing.

2. An example of critical thinking

A case study: Sonja's thoughts about the interview for the receptionist post

Sonja's diary entry for Thursday (superficial and not critical thinking)

'We interviewed five candidates for the medical reception post last week. I was on the panel but I was only invited on at the last moment even though I am actually doing the work myself. The job involves a variety of activities so it requires someone with a great deal of experience in medical reception work. It is probably more demanding than most reception jobs and I would say that not one of the candidates was good enough for the post. I was further upset then, that the others in the panel (none of whom are

receptionists), selected a young man whom I thought to be particularly unsuited. They said that he had a good attitude to people and 'potential'; that he was sociable and had some medical knowledge. I saw none of those qualities. The others in the office are all female and they will not like having a man there for a start – and a young man at that. He could not possibly have had experience of dealing with people in the manner that is required in reception and medical knowledge is nothing to do with the job as we do it. They have made wrong choice.

Sonja's diary entry for Tuesday (deeper critical thinking)

I have been thinking about my reactions to the interviews last week and the choice of a candidate of whom I strongly disapproved. While I still have doubts about the chosen candidate, I realise that there were good reasons for the choice. I was cross when I wrote that entry because I thought that, because I do the job, I would be the most influential person in the panel. Having talked this over with others, I realise that the doctors, nurses and the Manager (the rest of the panel) are bound to have a strong point of view on who makes a good receptionist as their work is influenced by the results of the receptionist's activities. Being upset with the situation did not help my judgement. Perhaps I was influenced by that occasion when my opinion was ignored in the last job.

And the choice of a man for the office - I had assumed that the others would not want a man in the office but they were actually pleased. They said it would be good to have a change. When I talked to the Manager about the interview, she said the chosen candidate is a bit young, but she feels that he is good with people and will learn quickly. His curriculum vitae suggests that he will be efficient and she said that our office as a whole needs to become more efficient and she is hoping his presence will stir things up. I realise I was making judgements on the basis of keeping things the same as they are.

So I realise that I had rather a narrow perspective on this interview – of wanting to keep the office the same as it is. I made assumptions that that is what the others would want and I was wrong. I also assumed that I knew best what was required in the job. All of my thinking was influenced by the fact that I was upset about my lack of importance on the panel. Talking to the Manager enabled me to recognise that there are points of view that I had not taken into consideration.

3. Approaches to critical thinking

The literature on critical thinking is very diverse. People think of it in different ways, for example, as

- logic
- as a set of skills and processes
- as something to do with pedagogy (teaching and learning processes)
- as a developmental process
- as an acquired way of thinking about knowledge and experiences in the world

4. The activities of critical thinking

Critical thinking involves different activities and this also causes confusion about what it 'is'. It is seen as:

- review of someone else's argument.
- evaluation of an object.
- development of an argument.
- critical thinking about one's self.
- the review of an incident
- engaging in constructive response to the arguments of others
- a habit of engagement with the world.

5. What does it take to learn to think critically?

- A sufficiently challenging environment and an atmosphere in which people are willing to be challenged
- A willingness to change one's mind, or fail
- A willingness to challenge – sufficiency of academic assertiveness
- A willingness to listen to other points of view
- An understanding of the issues in thinking critically (as above)
- A certain level of epistemological development – or sophistication in the understanding of what knowledge is.

6. Epistemological development

The term 'epistemology' is used here to refer to the learner's view of the nature of knowledge. Epistemological development has been the subject of a number of studies over the last half century that indicate that there is a developmental sequence in learners' epistemological beliefs and that this influences the manner in which learners function intellectually and it significantly affects their capacity for critical thinking, their ability to understand the nature of knowledge, the management of situations of uncertainty, their understanding of the nature of scientific endeavour and the idea of theory and its relationship to evidence.

I mainly refer to four substantial studies that broadly coincide on the nature of the continuum for epistemological development that they propose from experimental. The studies differ in the terminology that they use, in the populations that they studied, in the research method, in their focus on gender issues and in the number of stages in the continuum that they identified. They are Perry (1970), Belenky, Clinchy, Goldberger and Tarule (1986), King and Kitchener (1994) and Baxter Magolda (1992, 1994, 1996) (see comment about references below). With the exception of King and Kitchener, the research method was semi-structured interviewing. King and Kitchener asked subjects to work with ill-structured problems and then discussed with them their experience of the process.

Broadly the studies suggest that there is a qualitative change that occurs in learners' conceptions of knowledge and this is important for the processes of learning at the higher education stage. To describe this, I use Baxter Magolda's terminology for description, though I consider the description of stages a linguistically convenient means of describing a continuum. In this continuum of development, learners generally progress from 'absolute knowing' in which they tend to see knowledge as 'right or wrong', black or white – as a series of facts that they will absorb from a teacher who has the facts. Knowledge tends to be viewed as a commodity. They see teaching as the process of the 'passing over' of knowledge'. The teacher is expert. They shift towards the 'contextual knowing' phase in which they can (eventually) come to recognize that there may be a range of perspectives on any matter. At this stage they can also understand and assess in a sophisticated manner, the relationships between the different perspectives – that might be called theories or paradigms – and the issue in question. They can work in situations of uncertainty, taking appropriate measures to manage the situation in relation to their current purposes. They see their 'teachers' as partners in the development of knowledge. Only four of the undergraduates in Baxter Magolda's original study (1992) actually reached this stage – but I would see this stage – of contextual knowing - as epitomising the stage to which we should expect learners on a Master's programme to reach.

In some later work, Baxter Magolda suggested that learners progress when they are challenged in

higher education learning environments or in situations where they need to exercise independent judgements (eg in work placements or in professional situations), However, they do not do this 'smoothly' but by shifting forwards and sometimes backwards in different elements of this progression as they encounter different challenges to their learning. Most of the population largely functions with absolutist conceptions of knowledge – and it is the language of the absolutist stage that largely is used for general reference to knowledge and learning.

Below, I give you an outline of the four stages of epistemological development described by Baxter Magolda. I have also given you an example of what a student at each stage might say about her or his learning.

The stages of thinking described by Baxter Magolda (1992)

Stage of Absolute Knowing

In this stage knowledge is seen as certain or absolute. It is the least developed stage in Baxter Magolda's scheme. Learners believe that absolute answers exist in all areas of knowledge. When there is uncertainty it is because there is not access to the 'right' answers. Such learners may recognise that opinions can differ between experts but this is differences of detail, opinion or misinformation. Formal learning is seen as a matter of absorption of the knowledge of the experts (eg teachers). Learning methods are based on absorbing and remembering.

- **Eg Julia:** I like clear lectures where the lecturer does not mess around giving us lots of different theories for everything – but just tells us what we need to know and we can get on and learn it.

Transitional stage

There is partial certainty and partial uncertainty. Learners start to have some doubts about certainty and consider that authorities may differ in view because there is uncertainty. Learners see themselves as needing to understand rather than just acquire knowledge so that they may make judgements as to how best to apply it. Teachers are seen as facilitating the understanding and the application of knowledge.

- **Eg Ivan:** I thought I came to college to stuff my head with what is known. Now I feel confused because there are lots of things that are not certain. I have to think about what I do with those ideas. College learning is different from what I thought.

Independent knowing

Learners understand that there is uncertainty in knowledge but they consider that everyone should develop her/his own beliefs or opinions. This would seem to be an embryonic form of the more sophisticated stage of contextual knowing. Learners now expect to have an opinion and can begin to think through issues and to express themselves. They also regard their peers as having useful contributions to make to the development of their opinions. They will expect teachers to support the development of independent views, providing a context for exploration. However 'In the excitement over independent thinking, the idea of judging some perspectives as better or worse is overlooked' (Baxter Magolda 1992:55).

- **Eg Ella:** I used to think that everything was so certain – like there was a right answer for everything and what was not right was wrong. Now I have become more aware of people arguing over issues, debating. I suppose it is a matter of coming to your own conclusions and sticking to those.
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Contextual knowing

This stage is one in which knowledge is understood to be constructed, and the way in which knowledge is constructed is understood in relation to the consideration of the quality of knowledge claims and the context in which they are made is taken into account. Opinions are now be supported by evidence. The view of the teacher is of a partner in the development of appropriate knowledge.

- **Eg Krishna:** The tutor I have got now would have driven me mad last year. He just sits there and says 'OK, what do you think about this theory of coastal erosion?' He goes quiet and we discuss it. Then he will make the odd remark that usually sets us off again. I jot down some notes so that I take everything into consideration when I have to write it all up and think about it for myself.

7. Critical thinking and epistemological development

I consider that to be an effective critical thinker in its more sophisticated meaning, learners need to be reasonably sophisticated in their level of thinking in epistemological development terms. For example, if you believe that there are only right and wrong answers to be sought, then you cannot be a deep critical thinker and recognise that there are multiple perspectives on issues etc.

8. Critical thinking and pedagogy

The classroom or lecture theatre should be a place in which thinking is constantly challenged. This helps both the development of epistemological beliefs and the development of critical thinking (I see them developing in parallel). Students should not sit and just listen.... See www.CEMP.ac.uk/themes/critical thinking or look for my name in the www.cemp.ac.uk website (they are changing the system).

9. What do you need to do to facilitate critical thinking?

Appendix 1

An exercise on epistemological development to do on your own:

Epistemological development in perceptions of teaching, learning and the relationships between learners and teachers

This is an exercise that is based on the Baxter Magolda stages of epistemological development (above) and it is designed for teachers or for advanced students. The exercise can be used to introduce a discussion about the processes of teaching for new teachers, or to help learners to understand epistemological development. In the exercise there are statements from twelve fictitious students directly about their experiences of learning and four statements from teachers about their teaching. Three student statements and one teacher statement belongs to each of the four Baxter Magolda stages (above) – but they are mixed up at present. The task is to put the statements of teachers and students into the appropriate stages. The 'answers' are below, though it is perfectly legitimate to disagree with them!!

Statements about learning and teaching

Student - Jan: Good learning for me is when I listen really well in class and get down exactly what the teacher says - she is there to tell us what we need to know, after all. I don't like it when I have to work out what is the best way of explaining something when only one way can be the

right one.

Student - Mette: There are lots of things that are uncertain. To learn and make knowledge is to put ideas together, to make sense of them and to be able to say they make sense, knowing that they might make different sense to another person.

Student - Sam: We do not know everything and sometimes different people hold different views about a theory or idea. We have to learn to judge which theory is right so we have to learn to think. Being objective is a way of avoiding personal bias and finding the true answer.

Student - Tony: I realise that learning is not just a matter of getting facts down. We need to know about research and there are obviously things that have not been discovered yet. We have to be able to apply knowledge and to cope with situations of uncertainty. That is more than just learning facts

Student - Frederick: I like to make up my own mind about things and that is how it should be. Sometimes the -ideas come from teachers, other times from other sources. When things are uncertain or not clearly agreed, I have to be clear what I think.

Student - Joanne: We were given several theories in chemistry to explain a particular phenomenon. Our tutor did not make it quite clear which was most right - I guess that he wants us to think.

Student - Andres: We have to be objective - to know the facts about a matter. We put them down and make sure that we do not colour them with our biases.

Student - Elke: There is lots of uncertainty. Knowing facts only takes us so far and we have to learn to take a stand based on what we know and an understanding of objectivity.

Student - Mike: Knowledge is basically subjective since we come to it by relating new ideas to what we know already. We have to seek to be as objective as we can be in our judgements by recognizing, and where possible taking account of subjective influences.

Student - Sue: In biology, we are given lecture notes on exactly what we have to know for the test. That is what I call good education - clear and to the point - and no more.

Student - Hugo: In theology we listened to interviews with prominent theologians arguing for the existence of God. I was open to persuasion, almost willing them to give me an understanding of how they hold their faiths. My mind was not changed, though now I want to know more of what they all mean by 'faith'.

Student - Ed: In our politics seminar we argued about the position of Israel in the Middle East Conflict. It felt good to be holding my own. Nothing that any of the others said made me waver at all from what I think. I cannot start to see how the others got to how they think.

Teacher - Helen I cover the syllabus, but I try to get learners to think as they will have to cope on their own, applying ideas and sorting out right and wrong for themselves.

Teacher - Andrew: We are all in this game of learning and developing knowledge. I facilitate the knowledge making process, but recognise that sometimes my understanding is changed by contact with their ideas

Teacher - Leo I help the learners to engage in their own thinking. They need to read around a topic so they can develop their own views. I keep challenging them to nurture their development and expect them to come back at me

Teacher - Tom As a teacher, my duty is to give them what I think that they need to learn. We go through the syllabus systematically and I make the material as easy as possible for learning.

‘Answers’ These teachers and students are grouped in the following manner:

Absolute views of knowledge: Jan, Sue, Andres and Tom, (teacher)

Transitional views of knowledge: Tony, Joanne, Sam and Helen (teacher)

Independent views of knowledge: Frederick, Elke, Ed and Leo (teacher)

Contextual views of knowledge: Mette, Hugo, Mike and Andrew (teacher)

You can read more epistemological development in my book on critical thinking (2008) ‘Critical Thinking, an exploration of theory and practice’ or at <http://ESCalate.ac.uk/2041>; and www.CEMP.ac.uk/themes/criticalthinking - or (the website is being changed) – search under my name there.