

## Critical Thinking Experienced by Students: A Phenomenological Approach\*

Fredy Hernán Prieto Galindo\*\*

Recibido: 13 de abril de 2020 • Aprobado: 12 de mayo de 2020

### **A**bstract

Nowadays, the goal of teaching students to think critically seems ubiquitous in educational discourses worldwide. It is often said that if students develop this kind of thinking, they will be able to participate more aptly in social and democratic life because they could examine their thoughts and reasons and thus make better decisions. Such discourse has given rise to countless studies on the critical thinking levels of students and teachers in various areas of knowledge. On the contrary, little has been investigated regarding the very experience of thinking critically, that is, a phenomenological research about what a person experiences while exercising critical thinking. To respond to this lack of investigation, this article intends to present a phenomenological-hermeneutic description of the critical thinking experience developed as part of a phenomenological research. The relevant question in this paper is how do students experience critical thinking?

**Keywords:** critical thinking, experience, school, education.

---

\* Artículo de reflexión. This paper is the result of a 'mini' research developed in a research seminar I completed as part of my Ph.D. studies at the University of Alberta. The seminars' title was: Course Project Ethics for Graduate Students in EDSE 611 Phenomenological Research. The university's research ethics board approved the research (ID: Pro00092212), whose main investigator was Catherine Adams. The type of study was "Instructor Course-based (where all students in a class, individually or in groups, conduct the same or similar MINIMAL RISK research assignments, following project guidelines provided by the instructor)" (Ethics application, October 10th, 2019). Citar como: Prieto, F. (2020). Critical Thinking Experienced by Students. A Phenomenological Approach. *Análisis*, 52(97), 327-345. doi: <https://doi.org/10.15332/21459169/5659>

\*\* Licenciado en Filosofía por la Universidad de San Buenaventura (sede Bogotá) y cursante del *Ph.D. in Secondary Education* en la Universidad de Alberta (Canadá). Miembro activo del grupo de investigación *Prácticas Filosóficas* de la Universidad Pedagógica Nacional. Correo electrónico [freher05@gmail.com](mailto:freher05@gmail.com) ORCID: <https://orcid.org/0000-0001-9738-5653>

## Pensamiento crítico como lo vive un estudiante: un acercamiento fenomenológico

Fredy Hernán Prieto Galindo

### Resumen

En la actualidad, el objetivo de enseñar a los estudiantes a pensar críticamente parece omnipresente en los discursos educativos a nivel mundial. Se suele afirmar que si los estudiantes desarrollan este tipo de pensamiento, podrán participar más acertadamente en la vida social y democrática por cuanto podrán examinar sus pensamientos y razones y así tomar mejores decisiones. Tal discurso ha suscitado innumerables estudios sobre los niveles de pensamiento crítico de estudiantes y profesores en diversas áreas del conocimiento; sin embargo, poco se ha investigado (y nada en el ámbito escolar) la experiencia misma de pensar críticamente, es decir, investigaciones fenomenológicas de lo que una persona experimenta en medio del ejercicio del pensamiento crítico. Respondiendo a esta ausencia, este artículo presenta una descripción fenomenológica-hermenéutica de la experiencia de pensar críticamente, desarrollada como parte de una investigación fenomenológica. La pregunta que guía este texto es: ¿cómo vivencia un estudiante la experiencia de pensar críticamente?

**Palabras clave:** pensamiento crítico, experiencia, escuela, educación.

# La pensée critique telle qu'elle est vécue par un élève : une approche phénoménologique

Fredy Hernán Prieto Galindo

## Résumé

Aujourd'hui, l'intention d'apprendre aux élèves à avoir une pensée critique semble s'imposer dans les discours sur l'éducation partout dans le monde. On dit souvent qu'une telle manière de penser aide les élèves à mieux participer de la vie sociale et démocratique, puisqu'ils pourront examiner leurs pensées et leurs raisons d'agir et, par là même, de faire les meilleurs choix. Ce discours a donné lieu à des innombrables études sur les niveaux de pensée critique chez les élèves et les enseignants dans plusieurs domaines de connaissances ; or, on a très peu étudié, notamment en ce qui concerne l'école, l'expérience même de penser de manière critique. Autrement dit, il n'y a pas beaucoup de recherches sur ce qu'on ressent lorsqu'on exerce la pensée critique. Pour répondre à cet absence, cet article fait une description phénoménologique et herméneutique de l'expérience de penser de manière critique. La question centrale dans ce texte est la suivante : comment peut-on décrire le vécu d'un élève lorsqu'il pense de manière critique ?

**Mots clés :** pensée critique, expérience, école, éducation.

Nowadays, the goal of teaching students to think critically seems ubiquitous in educational discourses and even in educational policies. People often state that if students develop this kind of thinking, they will be able to participate more aptly in social and democratic life because they could examine their thoughts and reasons and thus make better decisions (Siegel 1998, 2007; Winch, 2006). Due to this interest, countless studies approached the critical thinking levels of students in various areas of knowledge (Pithers & Soden, 2000). Regarding the Colombian context, most studies are recent, and a considerable number of them come from undergraduate and graduate dissertations.

By and large, Colombian research addresses the students' development of critical thinking in all subjects, levels, and fields of education: in undergraduate school (Alquichire & Arrieta, 2018; Steffens, Ojeda, Martínez, Hernández & Moronta, 2018; Mejía, Orduz & Peralta, 2006); similarly, in high school (Causado, Santos & Calderón, 2015; Rios, 2017; Anganoy, Pantoja, Jurado, Vallejo & Botina, 2017; Lopez & Betancur, 2017; Vargas, 2015; Lara & Rodriguez, 2016; Macias, 2018; Reyes, Mellizo & Ortega, 2013); and, a minor quantity of studies approaches primary school (Arévalo, Burgos & Medina, 2017; Tamayo, 2014; Espitia, Reyes, 2012). Nevertheless, no study has been developed from a phenomenological perspective to explore students' experience while thinking critically, that is, what a person lives amid an exercise of critical thinking.<sup>1</sup>

Because of the above-mentioned lack of investigation, in this article are presented the results of a phenomenological research exercise on the experience of thinking critically. Along the research, the 'Canadian school of phenomenology' was followed, advanced mainly by Max Van Mannen (1997, 2002, 2014). This author proposes to understand phenomenology as a way to do research in education and other practical fields, such as nursing, psychology, and counselling. In his words, this is a "phenomenology of practice [that] refers to the kinds of inquiries that address and serve the practices of professional practitioners as well as the quotidian practices of everyday life" (Van Mannen, 2014, p. 15). This type of research addresses day to day practices that probably most people take for granted. However, nurses, teachers or anyone working in a practical field could notice facets of the phenomenon that could help them to understand its meaning and thus improve their professional actions and their responsibility. Van Mannen proposes phenomenology as

[...] the study of the life world □ the world as we immediately experience it prereflectively rather than as we conceptualize, categorize, and reflect of it □. Phenomenology aims at gaining a deeper understanding of the nature of meaning of our everyday experiences (1990, p. 9).

1 Wielgus (2015) addresses a critical thinking study from a phenomenological perspective. However, the researcher only focuses on philosophers' experience as of Plato, Descartes, Heidegger, Arendt, but does not approach the students' experience. A second study (Thew, Gregory, Roberts & Rimes, 2017), from a psychological perspective, studies phenomenologically self-critical thinking in healthy individuals and in people with depression, eating disorders, etc.

Therefore, phenomenological descriptions strive for presenting the experience as it is lived before it is reflected upon, classified, and categorized to discover the meaning people make of their lived experiences. In other words, phenomenological research is not based on a substantive theory that defines the phenomenon before studying it but intends to find it before any conscious reflection.

In this work, I draw on critical thinking as lived by Colombian students. Accordingly, every section below will start with a scene of the experience of critical thinking lived by a postgraduate student. In order to do a phenomenological analysis, firstly I propose a description of different aspects of the experience by identifying various features of the critical thinking process as it is lived by students. Secondly, I attempt to deeply interpret the experience itself in a more hermeneutic style, rather than just in a descriptive one. Considering the phenomenological perspective briefly stated above, the question that guides this text is how do students experience critical thinking?

In the first section of this paper, I address an example of critical thinking as it is represented in Socrates' apology, that is, in Plato's mind. Thereupon, I analyze the relation among Socrates' critical thinking to one of the current images of critical thinking in education. The following three sections present 'real' lived experiences of critical thinking, which I analyze in its constitutive aspects and interpret independently from the other sections of the paper. Finally, the text concludes with a short summary of the components that the experiences show about critical thinking as it was lived.

## Teachers' expectancies about critical thinking

Socrates:

Something wondrous has happened. For my customary divination from the daimonion was always very frequent in all former time, opposing me even in quite small matters if I were about to do something incorrectly (...). But the sign of the god did not oppose me when I left my house this morning, nor when I came up here to the law court, nor anywhere in the speech (...) it has nowhere opposed me either in any deed or speech, concerning this action [to drink the venom]. What, then, do I take to be the cause of this? (...) Probably what has occurred to me has turned out to be good, and there is no way that those of us take it correctly who suppose that being dead is bad. (...) Now being dead is either of two things. For either it is like being nothing and the dead man has no perception of anything, or else, in accordance with the things that are said, it happens to be a sort of change and migration of the soul from the place here to another place (...) it is clear to me that it is now better, after all, for me to be dead and to have been released from troubles. This is also why the sign did not turn me away anywhere (Plato, 1979, p. 46-47 / 40a-c).

What is this long sequence of thought? It has wonder, a question, multiple scenarios, arguments, and a final answer. This course of thought is currently called *critical thinking* in the field of education: the procedures of thought along with the 'rules,' the criteria we should follow to critique an idea, decision, or action. How did Plato imagine this thinking? Socrates found *something wondrous*: his *daimon* (his consciousness) did not advise him against taking his own life. Such a surprise made him pose a question to himself: "What, then, do I take to be the cause of this?" His first answer or hypothesis states a mere possibility: "Probably what has occurred to me has turned out to be good." But this hypothesis challenges the common beliefs about death since people "suppose that being dead is bad." After this question and possible answer, Socrates—in Plato's imagination— goes on to examine such a belief in a long consideration of arguments (too long to be quoted here): "being dead is either of two things..." Based on that examination of reasons, he reaches an answer to his first question and makes his final decision: "it is clear to me that it is now better, after all, for me to be dead."

In this scene, a well ordered and clear set of thoughts that ends in a response and a decision is presented. Of course, this scene in Plato's dialogue is but his imagination about Socrates' thoughts. We have an excellent instance of what teachers and academicians might consider to be critical thinking: a flow of well-ordered and pursued chain of thoughts that deeply examine a statement, decision or action. In this re-presentation of Socrates' scene some parts were provisionally replaced with (...) signs. Why were these spaces excluded in the above quotation? The reason behind this will be clarified in the next sections.

Plato's example of critical thinking coincides with one of the most extended theories of critical thinking in the Hispanic countries (Difabio, 2005): the *Critical Thinking Movement*, which defines that type of thinking by a set of thinking skills, logical criteria, and dispositions. For example, they propose the following skills: "interpretation, analysis, evaluation, inference, explanation, and self-regulation" (Facione, 2013, p. 5). These skills seem to be represented in the above quotation by Plato. Furthermore, along with the skills, critical thinking includes a cluster of dispositions: habits of mind and character traits, referred generally as the dispositional component or critical spirit. "This extends the ideal beyond the bounds of the cognitive, for, so understood, the ideal is one of a certain sort of person" (Siegel, 2010, pp. 142-143). The dispositions widen the narrow logical concept of critical thinking that characterizes it above. An example of such dispositions is:

1. Care that their beliefs be true, and that their decisions be justified; that is, care to 'get it right' to the extent possible; including to
  - a. Seek alternative hypotheses, explanations, conclusions, plans, sources, etc., and be open to them
  - b. Consider seriously other points of view than their own (Ennis, 2011, p. 2)

In the end, dispositions seem just to execute the reason's abilities; they are in the service of reason so it can do well its job (Prieto, 2018). Such an understanding of critical thinking is taught in school through a series of exercises in which teachers demand the identification and examinations of the elements of any rational (thesis, arguments, fallacies, concepts, causal connectors, and so on). This conception of critical thinking seems to put great emphasis on the thinking skills above all the dispositions. In terms of pedagogy, this action ends up in a very technic implementation in class so as to students develop their skills and dispositions.<sup>2</sup> However, it could be asked if real, lived experience of critical thinking is like the Critical Thinking Movement's and Plato's conceptions suggest. That is, do students think critically in such a well ordered and clear sequence of thoughts, questions, hypotheses, and examinations of arguments? In other words, how do students experience critical thinking?

The following three sections will present students' lived experiences of critical thinking in academic settings. Every experience will be followed by the analysis and interpretation of its components. The last section of this paper summarizes the key features of these three experiences.

### Critical thinking: questions and possible answers

As the teacher explains a philosopher's conception of the relation of Humans, Technology, and the World, she writes the letters H, T, and W on the whiteboard. I move back in my chair and spin it a little so as to watch the board clearly. I see the T in the middle of the H and the W, and suddenly that seems strange to me. I am skeptical... It is as if the world was conceived only through technology. Is that so? If the world is the meanings that we attribute to our relations to things, how could a tool, another thing, mediate that meaning attribution? Let's suppose so. Has it always been this way? What if there was no technology? Have we always had technology? How was it in primitive times? I imagine a caveman with a stick or a stone in his hand... Maybe yes, even with rudimentary tools, we always have dealt and built the world through utensils. So definitely yes, we not only relate to the world through technology, but we create it, we give meaning to it by employing these instruments... Interesting!

The passage describes an experience of critical thinking lived by a student in the middle of a class. In this case, the student started to think critically as a spontaneous response to something particular: "that (H-T-W) seems strange to me." Sometimes we find ourselves caught by something that makes us think, it seems to emerge from a specific, rare situation; it springs from strangeness.

2 This concept of critical thinking has been very controversial among scholars. Some of the critiques state it is too or even exclusively logical (Popkewitz, 1999; Walters, 1994); its epistemology is too narrow (Warren, 1994); it does not consider political and sociological contexts, therefore it assumes ideologies that maintain the *statu quo* (Burbules and Berk, 1999); it leaves aside human dimensions, such as emotions and intuition (Gallo, 1994; Thayer-Bacon, 1999, 2000; Missimer, 1994).

Suddenly something catches our eye, something that is not clear or is missing or otherwise appears unexpected. In Heideggerian terms, something “addresses itself to thought” (1968, p. 17). It is the world or the phenomenon itself that addresses the student or any person who might be attentive to ‘welcome’ the addressing. It is the phenomenon itself what triggers a chain of actions.

Certainly, it is as if the object of thought had raised itself, presented itself to the student and caught their attention, and then the student started to propose those images, ideas, questions. This proposition is comparable to the images, ideas, and questions putting themselves in front of the student so as to help her to start the critique; as though the process of critical thinking were just at the beginning of the stage of creation. In this student’s experience, such a situation prompted a personal opinion with a question and a process to answer it: “I am skeptical... is that so?” But up to this point, where there is just wonder, no critical thinking is deployed, or it is only incipient, just emerging.

Indeed, when we are captured by wonder or strangeness, we just begin to focus, to see what has addressed us. The passive sense of the sentence is important as it reveals certain passivity implied in the process of critical thinking. We do not catch the wonder, it is the phenomenon that has caught our attention and then we wonder due to the peculiarity in it. This is more a state of being (in which we suddenly find ourselves) than a cognitive ability in operation started by us. We cannot control wonder; rather it controls us, or at least, it takes us out of our usual state to begin to center our attention on what causes the oddness. When we have a phenomenon to hear, we have something to examine, hence we can start to think about it. We need to focus on it if we want to examine it. Thus, in the end, we seem to be passive under the wonder that hits us, that drives us to concentrate on the phenomenon; thereupon we can start the criticism. Perhaps nobody “begins to think critically... simply by choosing to do so” (Wielgus, 2015, p. 27), that is, a student probably cannot decide when to think critically, but it just happens.

Maybe we engage deeper in critical thinking when a new interpretation, hypothesis, or even an odd image comes to us. To the student, it was a hypothesis: “as if the world were conceived only through technology.” And then, they pose a critical question: “Is that so?” The student could have stopped here and left the question that came to her, but instead she decided to go on. Afterward, more questions emerged: “Has it always been like that? What if there were no technologies? Have we always had technology? How was it in primitive times?” Different scenarios are considered: “How was it in primitive times? I imagine a caveman with a stick or a stone in his hand.” Naturally, all thoughts are seldom spoken aloud; neither are they necessarily in perfect order, uninterrupted or even complete. To this student, only an image of a caveman was sufficient to approve the hypothesis: “So definitely yes, we not only relate to the world through technology but we create it, we give meaning to it by using these tools...” Probably between the caveman image and her conclusion the student had many thoughts or images in the back of her mind that led her to that final statement.

To deepen the examination of the student's experience of critical thinking we can ask the question: When did it start? When the student *saw* something strange: "I see the T in the middle of the H and the W..." It is remarkable that all started in perception, a corporeal activity, rather than just a purely mental exercise. Likewise, we could be listening, or touching the keyboard or a pencil and feeling the strangeness, but this student saw something that called her. This seeing is physical. Certainly, the student was not imagining but attending to the teacher's writing on the board. This is not just mental attention. In the middle of a class, anything can catch our eye; it calls us, and we turn to it. As Heidegger suggests, "to be capable [of thinking] we must before all else incline toward what addresses itself to thought" (1968, p. 17). The student is suddenly struck by the image on the board and immediately inclines herself, bends her thinking towards this unexpected call. What does such inclining convey?

This inclination is above all, to be sure, a thinking disposition. However, could it be really just an interior thinking without any corporeal disposition? The student was caught by seeing something, but did not stay immobile, static. The student moved from her original position: "I move back in my chair and spin it a little." It seems that what makes her move was her position in the classroom, so the student moved to better see the board. Now the student is immersed in observing the board and thinking. Maybe the body, its posture does not think itself, but it could favor or hinder thinking. Surely, when we are listening to a lecture, we move our head to see the notes on the whiteboard or just to change our position to a more comfortable one, but we move. The inclination which makes us capable of thinking is not only a thinking disposition but also a corporeal posture to attend what comes or appears to us. The oddity addressed this student, and in response, the student inclines their mind and body to what called her. In the end, the response to the addressing is thinking in the middle of a disposition, mental and corporeal. What else does it include?

### **Wonder: posing questions and feeling things!**

I am sitting in class, reading my classmates' pieces of writing and listening to the teachers' comments. My teacher asks to my friend: "I wonder, who are you thinking about, the nurse or the patient?" I check my text. Wow, the person is not explicit in my writing either! And last week I was asking for the person in a different text. Oh, shoot! How could I miss the very same thing I was demanding before? I feel frustrated. It was so obvious, yet I missed it! I feel my strength fades away... Did I miss other criteria? I check the first and second criteria: all right, no problem there. Perfect! Then, the third criterion says: "Is this question concrete? Does the wording of the question avoid theoretical, abstract, and technical concepts?" Um... I wonder if my topic is not as concrete as I think...

"I wonder, who..." Something has caught the teacher's eye, and a question is posed: "who are you thinking about, the nurse or the patient?" At that moment,

the student becomes aware of missing the same thing, and thinks: "Wow, the person is not explicit in my writing either!" The realization invites a surprise, the amazement before something unexpected, good or bad or neither. Something was not expected and it rises up and presents itself to us. We are struck and feel addressed by that, maybe even attacked. It is as if a rupture is opened in the quotidian life, in the taken-for-granted. This sensation surely demands that we pay attention to it, to focus, even just for a few seconds. Moreover, such a wonder may induce us to start questioning that phenomenon. The teacher and the student wonder about something specific: the subject of the text, something that was not there, that was missing; such emptiness causes the strangeness, the surprise. This realization makes the student pose a question and start to examine deeper her text: "Did I miss other criteria?" Wonder, in its paradoxical form of surprise and questioning, reveals that critical thinking has a certain experience of surprise and thereupon invites to do the exercise of posing questions.

The student states a question after finding something strange. In the case at hand, the question is very precise: "Is this question concrete? Does the wording of the question avoid theoretical, abstract, and technical concepts?" Once we make a question, a search for an answer follows, which could include more and more questions and possible answers. But the student asked a question about the concreteness, an unusual question. In this experience of critical thinking, the student is responding to a set of criteria given by the teacher.

The question, we could say, carries the weight of the thinking. It sets the thinking in action, hence other kinds of thoughts emerge or are called: hypothesis, scenarios with practical or theoretical examples, analogies, images, and so forth. A question, regarding critical thinking, contains the specific aspect that should be pondered, around which the other kinds of thought are played. The question is the element of thinking that leads us to begin a search for an answer. As Heidegger states, "every seeking gets guided beforehand by what is sought" (2001, p. 24), which might well mean that the phenomenon that presents itself to us is what starts the seeking, the questioning, the wondering. It is as if the phenomenon by itself started the process of seeking through the questions that emerge in our mind. In other words, "in what is asked about there lies also that which is to be found out by the asking" (Heidegger, 2001, p. 24). Thus, if we pay heed to the question itself, it will guide us, show us the path to find what we seek.

We saw that wonder may be expressed by questions, but it also might be conveyed by feelings: "How could I miss the very same thing I was demanding before? I feel frustrated. It was so obvious, yet I missed it!" Wonder is expressed by a question and some propositions of feelings: frustration, probably a reproach. It might be that wonder is a kind of mood of openness to questioning and feeling. Critical thinking is not always a clear and pure current of thoughts but may also consist of some other type of components, namely surprise, questions, images, feelings/emotions, bodily movements. This student feels a moment of frustration and stops thinking about her text and the criteria: in this moment there are only feelings... The thinking seems to be interrupted, or at least it is

left in pause. This action is very similar to the rupture experienced in the first wonder. Certainly, here we see a second wonder, but about the student's actions: the realization of making a mistake. Critical thinking might be about itself too. But the student did not continue this thread, instead chooses to keep on the previous track.

Critical thinking may be highly emotionally charged. It may well happen that the person is caught in a set of feelings and her thinking has no arguments, nor questions or hypotheses to respond to them. Clearly, here there would be no critical thinking at all. Reimagine the story: "...I feel frustrated. It was so obvious, yet I missed it! I feel my strength fades away... Did I miss other criteria?" Then, the student could have said: *Ah, what sense does this make, if I am going to fail again? This is hopeless! I better do something else...* In that hypothetical case, the student was swept away by her feelings and stopped attending to the question and the wonder. This common case depicts the possible failures of allowing feelings to overcome the processes of tranquil thinking.

To prevent this, teachers often advise their students to control their feelings and think with a cool mind. What does this mean? Does it mean to leave feelings aside, to stop feeling? If so, is that possible? Again, listen to Heidegger: "we learn to think only if we radically unlearn what thinking has been traditionally" (1968, p. 8). Customarily, thinking has been understood as something different from feelings and as something that should not be mixed. But the story of this section shows that people could think and feel almost simultaneously. It shows that one could even empower the other one: the more possibilities we think of, the more we may feel, and vice versa. Our feelings seem to be part of that wonder that takes us through critical thinking. And if one overpowers the other, the latter is left aside, even just for a few seconds, from the flow of thinking. In a successful episode of critical thinking what may happen is that there is a certain balance among feelings and thinking.

Critical thinking is not always a pure sequence of intellectual activities; it is not as structured as teachers might desire. The emergence of feelings may take us to several possible actions: to stop checking the text, to persist until the end, or to go on just a few more minutes. But what this student did was to check other criteria given by the teacher. When noticing that the other two criteria were rightly applied, the person states: "all right, no problem there. Perfect!" Afterward, the student delves into other criteria and a new cycle of critical thinking starts. "Um... I wonder if critical thinking is not as concrete as I think..." Indeed, we could say that critical thinking is cyclical. When we already have the criteria to meet, we ponder every criterion. In the end, every checked rule means the beginning of a new start.

## Critical thinking and practical decisions

I am reading, and I find the concept of Intentionality. I feel excited and frustrated at the same time because I've been thinking about

this notion for years, and during the last months I found another “definition” of it. And then I remember some academics that are more interested in what the individuals do by themselves even from a biological point of view. I stop reading, look upwards and wonder if maybe I am going too far at considering subjectivity as a matter of social and cultural realizations. Mostly because individuals are making decisions all the time... If I feel hungry and decide to eat a bar of chocolate... is it an action derived from interactions? Not all cultures eat chocolate, much less sweet chocolate... I decide to eat it because in my culture it is an available referent... but in the end, isn't it my own decision to eat it? Is hunger a cultural or only biological issue? In the end, it is a possibility of the environment I interact with (and in) every day that I can eat when “I want to.” Then I see the author is taking too long to explain such a concept, but I also have the intuition he is trying to explain the social subjectivity without excluding individual actions, so I decide to read on.

The student is reading and finds something of interest: “the concept of intentionality.” Some feelings arise during the process of reading: “I feel excited and frustrated at the same time...” Besides, some memories or connections: “then I remember some academics that are more interested in...” At some point, the question emerges: “And I start to wonder if maybe...” This student has approached the same topic before: “I’ve been thinking about this notion for years.” It is when reading, and almost automatically, that a few theories studied before came to her mind. Hence the person compares the previous with the new, and various possibilities emerge: “maybe I am going too far at considering subjectivity as...” Regarding Gadamer’s reflection, when such connections come to an academicians’ thinking, they surely stop and listen to them, and “anyone who listens is fundamentally open” (2004, p. 355).

This openness is the space where other things may appear or grow. Of course, the opening may be just silence, where there is a pause: “...,” a few seconds of inner silence, where no ideas or images flow as before. In silence we could experience a lack of specific contents and emptiness; nothing concrete appears in the thinking stage, but just mute time of brain processing. This, certainly, could be just one or two seconds, after which something new emerges: “If I feel hungry and decide to eat a bar of chocolate... is it an action derived from interactions?” Those three little dots mark the pause, the silence of thoughts, followed by a question regarding the played scenario. What do these dots, this pause, mean? Is there a specific action in the person thinking, even though there are no words or images? Perhaps our brain needs time of silence as it needs images and words to process the information provided, so we need to stop and give some silence to ourselves.

The student is open to some possibilities, including her self-examination: “maybe I am going too far at considering subjectivity as...” Here the accounting of the possibility of making a mistake emerges; the student is open to that. In Gadamer’s words, “Openness to the other, then, involves recognizing that I

myself must accept some things that are against me, even though no one else forces me to do so" (2004, p. 355). Critical thinking is not just about outside facts or ideas, but also about us, our thinking and actions, which are pondered while thinking. In that way, when thinking critically we are open to the out-side and to the in-side. Critical thinking seems to include a disposition of openness in which we accept otherness and we stop to consider it in relation to what we are seeking, even in silence.

The process of thinking critically requires that we stop other activities and focus on our thoughts, otherwise, everything would mingle in an unimaginable ball of strings without a clear beginning or end. "I stop reading, look upwards and wonder if maybe..." We are forced to decide either to read or think, to alternate between reading and thinking about what was read, or between the theory that comes to mind and the text content, or the images, the scenarios. Stopping is as necessary as silence. Stop and silence help us to think, to consider possibilities; in Heideggerian terms, to listen to what addresses us (1968). Uninvited, several questions, possible scenarios, hypothesis may quickly pop up. Such elements seem to be a spontaneous response to that stop and silence. Only stopping allows us to continue; only silence helps us to think. Among stops and silences, questions and possible scenarios, critical thinking could take form, but such a process cannot be developed in the rush of an uninterrupted flow. In the end, the flow of thinking critically comes during stops, silences, and a careful pondering of possibilities.

This experience of critical thinking, with all its moments of thinking, stops, and silences could seem pointless to the student. Certainly, such a scene of thinking did not take the student to a theoretical conclusion about that concept. Rather, she seems tired of the many possibilities found: "I see the author is taking too long to explain such a concept." The student wants an answer, but this reading and the episode of critical thinking that come along are endless as if no result was obtained. Nevertheless, there is a valuable outcome: "I also have the intuition that the author is trying to..." This finding is not a conclusion or clear answer to her question, it is an intuition. Despite of the questions, hypotheses, scenarios, possible answers, in this student's experience there is no concrete and final response to the initial question. What is, then, the end of this experience of critical thinking? Actually, must all critical thinking have an end, like an answer or conclusion? No, not necessarily. This student explicitly decides to act: "I decide to read more about it." The topic of criticality addresses the student and, afterward, she decides whether to attend to it or not. In the end, it seems as if critical thinking is about the disposition, the inclination to the addressing and how the person responds to it.

## Final Thoughts

The experiences of thinking described and analyzed above help us recollect some scenarios of critical thinking in the world of school. For example, a student

listening to/watching a teacher giving a lecture, hearing feedback or checking an assignment, and reading a paper. Although phenomenological research is not aimed at generalizing results nor controlling the phenomenon, the lived experiences presented and interpreted here might give teachers clues to reflect on when teaching critical thinking. Indeed, the experiences seem to have in common several aspects.

In terms of what the students' lived experiences show, there is agreement with what was found in a doctoral research about the same topic, but regarding philosophers experiences: Critical thinking is "a type of thinking that (a) is prompted by something that invites thinking and (b) leads to the critical questioning of something that the thinker normally presupposes" (Wielgus, 2015, p. 17). First, a specific aspect of the topic listened or read or watched catches the students' attention, something addresses them or invites them to think. The emergent element wonders or surprises the students, and they stop their activities and turn to what appeared. The body and mind acquire a posture and disposition, the attention begins to focus, and the body moves accordingly. Second, the most intellectual dimension of critical thinking begins: a question is raised, and a process of possible hypothesis and scenarios appears to play with. The particularity here is that the students seem to find something that they had taken for granted before, and they start to examine it.

Another more specific aspect of the experiences already analyzed here is, first of all, the distinctive thinking abilities or skills deployed in the students' experiences: raising questions, putting forward possible answers to the questions, playing with images in the mind, offering and examining theoretical arguments. Likewise, some dispositions are activated along the whole episode of thinking, such us openness, attention, and perseverance. Thus, these experiences confirm the theories that account for thinking skills and dispositions as basic elements of critical thinking (Pithers, & Soden, 2000; Siegel 1988, 1997, 2010; Ennis, 2011; Difabio, 2005).

Taking wonder or surprise as the starting point, it is noticeable that it is followed by a series of questions that seem to be the preamble to certain sense of skepticism towards the phenomenon that has appeared. Perhaps skepticism is a core element of critical thinking; it is the moment for the person to start to examine what has risen before her. The person 'naturally' dis-believes. Nevertheless, this skepticism also leaves open the possibility of finding something else, a new idea or piece to examine. It seems to be a kind of skepticism that incites to find an answer or keep thinking about the problem at hand. Apparently, this state of skeptical position is maintained until the moment where a definitive answer, conclusion, or decision is reached.

An element that might not sound very critical in the common accounts of critical thinking is imagination. Since it appeared in two of the experiences as an important part of the process of thinking critically, it might be that imagination is an ability that frequently contributes to develop the examination required to

reach the answer or conclusion. The sound of the expression 'critical thinking' usually invites to think of a logic mind rather than imagination. Nevertheless, it could even be said that critical thinking is an imaginative task, or at least perhaps there are different types of critical thinking and only some of them require imagination. Actually, the second experience where the student was just pondering the criteria given by the teacher does not use imagination at all. Thus, it may be that when a person follows a specific path of pondering, imagination is constrained, and the examination process requires only logical skills.

Parallel to the features above mentioned, every lived experience showed particularities worthwhile of reflection in a teaching context. Interestingly, the referred experiences process started with surprise or wonder; this action might place the student at a passive state. But any student that is in her classroom and just receives the addressing can react passively: it is like a spring of ideas, images, and questions. This passivity challenges the common conception that conceives the control over the mind abilities in order to think. Nobody can control and reproduce wonder or its effects; it just happens. Is wonder teachable at all? Or what could be taught of critical thinking so that students can learn to do it?

Regarding the second experience, we saw that the student expressed particular feelings and emotions in the middle of the process of thinking critically. It seems that critical thinking is not a set of clear and fluent chain of thoughts 'purified' from all kinds of affections. In the first experience we saw body movements, surprise, and in the second we have feelings or emotions that go along with the thinking. It is as if critical thinking is not just thinking, or as if thinking pauses while other components of the experiences come into play. If feelings and emotions just emerge in the middle of the process of thinking critically, there is not possibility of hindering them. Are we just passive beings when feelings arrive or do we really have the power to control them? If so, what could we teach and ask our students about feelings when thinking critically? What could we do about feelings so as not to stop thinking critically, but to pursue in the exercise?

Finally, the third experience shows us how the process of critical thinking required from the student to be open to assess and even accept other options. In a way, this openness is likely to conversing to ourselves. Obviously, there is no other person, at least not in the experiences that we read, thus the same person plays two roles. Or it might be the case that two students engage in a conversation and it turns into a critical dialogue about the referred topic. It is interesting to note that regarding the expression 'critical thinking' the students talked about an inner conversation just with themselves. Have teachers insisted too much in picturing critical thinking as an individual mental exercise or activity? If so, how have they done it? Is critical thinking necessarily an individual, solipsistic activity?

To finish this paper, it is necessary to remember that a phenomenological study only intends to show, to describe what the person experiences when living an instance of critical thinking. Therefore, these accounts are of three particular

experiences which must not be generalized. Not every person or every act of critical thinking includes the elements here mentioned. In this regard, Gadamer's words are very enlightening: "[...] essential to an experience is that it cannot be exhausted in what can be said of it or grasped as its meaning" (2004, p. 67). This, of course, is an invitation to continue doing phenomenology on the topic of critical thinking.

## References

- Alquichire, Sh., & Arrieta, J. (2018). Relación entre habilidades de pensamiento crítico y rendimiento académico. *Voces y Silencios. Revista Latinoamericana de Educación*, 9(1), 28-52.
- Anganoy, A., Pantoja, C., Jurado, M., Vallejo, R., & Botina, Z. (2017). Caracterización de las habilidades del pensamiento crítico y su relación con el desempeño académico [Unpublished Master Dissertation]. Universidad Pontificia Bolivariana, Puerto Caicedo, Putumayo.
- Arévalo, L., Burgos, M., & Medina, K. (2017). Aportes teóricos que contribuyen al desarrollo del pensamiento crítico en educación inicial en Bogotá. [Unpublished Dissertation]. Universidad Francisco José de Caldas, Bogotá.
- Causado Escobar, R., Santos Carrasco, B., & Calderón Salas, I. (2015). Desarrollo del pensamiento crítico en el área de ciencias naturales en una escuela de secundaria. *Revista de la Facultad de Ciencias*, 4(2), 17-42. doi: <https://doi.org/10.15446/rev.fac.cienc.v4n2.51437>
- Difabio, H. (2005). El critical thinking movement y la educación intelectual. *Estudios sobre Educación*, 9, 167-187. Retrieved from <http://dspace.unav.es/dspace/bitstream/10171/8919/1/NE.PDF>
- Ennis, R. (2011). The Nature of Critical Thinking: An Outline of Critical Thinking Dispositions and Abilities. Retrieved from [http://faculty.education.illinois.edu/rhennis/documents/TheNatureofCriticalThinking\\_51711\\_000.pdf](http://faculty.education.illinois.edu/rhennis/documents/TheNatureofCriticalThinking_51711_000.pdf)
- Espitia Castañeda, J., & Reyes Sánchez, E. (2012). Desarrollo del pensamiento crítico a través de la lectura del cuento infantil (cuentos de los hermanos Grimm). [Unpublished Graduate Dissertation]. Universidad Libre de Colombia. Bogotá. Retrieved from <http://repository.unilibre.edu.co/bitstream/handle/10901/6019/EspitiaCastanedaJennifer2011.pdf;jsessionid=8DFC6CDBD540A3E5AD281DF88E6F1A5C?sequence=1>. Retrieved October 20, 2017.
- Facione, P. (2013). *Critical thinking: What it is and why it counts*. Millbrae, ca: California Academic Press. Retrieved from [https://docs.google.com/viewer?a=v&q=cache:Cai9Xa4LAjsJ:www.insightassessment.com/pdf\\_files/](https://docs.google.com/viewer?a=v&q=cache:Cai9Xa4LAjsJ:www.insightassessment.com/pdf_files/)

what%26why2006.pdf+(2013)+%22Critical+thinking:+what+it+is+and+w  
 hat+it+counts%22&hl=es&gl=co&pid=bl&srcid=ADGEESjsAXrVIVSbsR  
 EspCrS5wx\_7llsOt\_-hLx9LQl8fdoHTEKKKLNHLHYiY\_AapIqr12CS37e-  
 Q8AyZyAcS9GihGN97aI2Y\_\_CIUo\_VwK-g9-rdCaZKh-j-C9UTbRS3Cno  
 E2X0YmPdo&sig=AHIEtbS82zvyJnnm7ZLcladG8I73uO\_OS w

- Gadamer, G. (2004). *Truth and method*. New York, NY: Continuum.
- Gallo, D. (1994). Educating for empathy, reason, and imagination. In K. Walters (Ed.), *Rethinking reason: New perspectives in critical thinking* (pp. 43-60). New York: State of New York Press.
- Heidegger, M. (1968). *What is called thinking?* New York, NY: Harpers and Row Publishers.
- Heidegger, M. (2001). *Being and time*. Oxford: Blackwell publishers.
- Lara, J., & Rodríguez, E. (2016). Fomento del desarrollo del pensamiento crítico en estudiantes de grado décimo desde situaciones cotidianas en la asignatura de Filosofía. *Revista Educación y Humanismo*, 18(31), 343-357. <http://dx.doi.org/10.17081/eduhum.18.31.1383>
- López, P., & Betancur, Z. (2017). Propuesta para la identificación de dimensiones del pensamiento crítico desarrolladas por estudiantes formados en educación tradicional vs formación no tradicional para el fortalecimiento de modelos educativos innovadores a partir de la herramienta SenseMaker® con estudiantes del grado octavo y noveno de la Institución Educativa Adolfo León Gómez, Municipio de Pasca Cundinamarca. [Unpublished Undergraduate Dissertation]. Corporación Universitaria Minuto de Dios. Bogotá.
- Macías, H. (2018). Una propuesta pedagógica frente a la lectura crítica de textos filosóficos en una institución educativa del departamento de Santander. *Cuadernos de Filosofía Latinoamericana*, 39(118), 177-193. doi: <https://doi.org/10.15332/10.15332/s0120-8462.2018.0118.10>
- Mejía D, A., & Zarama, R. (2014). La promoción de pensamiento crítico en Ingeniería. *Revista de Ingeniería*, 0(20), 88-102. doi: [10.16924/riua.v0i20.427](https://doi.org/10.16924/riua.v0i20.427)
- Mejía, A., Orduz Valderrama, M. S., & Peralta Guachetá, B. M. (2006). ¿Cómo formarnos para promover pensamiento crítico autónomo en el aula? Una propuesta de investigación acción apoyada por una herramienta conceptual. *Revista Iberoamericana De Educación*, 39(6), 1-16. <https://doi.org/10.35362/rie3962549>
- Missimer, C. (1994). Why two heads are better than one: philosophical and pedagogical implications of a social view of critical thinking. In K. Walters

- (Ed.), *Rethinking reason: New perspectives in critical thinking* (pp. 119-134). New York: State of New York Press.
- Pithers, R. T., & Soden, R. (2000). Critical thinking in education: A review. *Educational Research*, 42(3), 237-249.
- Plato. (1979). *Apology of Socrates*. Translation. In Thomas West (1979), *Plato's apology: An Interpretation with a New Translation*. New York, NY: Cornell University Press.
- Prieto, F. (2018). El pensamiento crítico y autoconocimiento. *Revista de filosofía*, 74, 173-191. Retrieved from <https://dx.doi.org/10.4067/S0718-43602018000100173>
- Popkewitz, Th. (1999). Introduction. Critical Traditions, Modernisms, and the 'Posts'. In Th. Popkewitz & L. Fendler (Eds.), *Critical Theories in Education* (pp. 1-13). New York: Routledge.
- Reyes, J., Mellizo, N., & Ortega, A. (2013). Pensamiento crítico y rendimiento académico en contextos educativos rural y urbano. (Master dissertation). University of Manizales. Retrieved from <http://ridum.umanizales.edu.co:8080/xmlui/bitstream/handle/6789/768/PENSAMIENTO%20CRITICO%20Y%20RENDIMIENTO%20ACAD%20C3%89MICO%20EN%20CONTEXTOS%20EDUCATIVOS%20RURAL%20Y%20URBANO.pdf?sequence=1>
- Ríos Carrascal, O. (2017). Desarrollo de habilidades de pensamiento crítico en las ciencias sociales a través de la implementación de organizadores gráficos en la educación media rural. *Assensus*, 2(2), 83-98. Retrieved from <https://revistas.unicordoba.edu.co/index.php/assensus/article/view/1323>
- Siegel, H. (1988). *Educating reason: rationality, critical thinking and education*. New York: Routledge.
- Siegel, H. (1997). *Rationality redeemed? Further dialogues on an educational ideal*. New York: Routledge.
- Siegel, H. (2010). Critical Thinking. In P. Peterson, E. Baker & B. McGaw (Eds.), *International Encyclopedia of Education* (pp. 141- 145). Oxford: Elsevier.
- Steffens, E.J., Ojeda, D.D., Martínez, J.L., Hernández, H.G., & Moronta, Y.H. (2018). Presencia del pensamiento crítico en estudiantes de educación superior de la Costa Caribe Colombiana. *Revista Espacios*, 39(30), 1-14.
- Tamayo, O. (2014). Pensamiento crítico dominio específico en la didáctica de las ciencias. *Tecné, Episteme y Didaxis: TED*, (36), 25-46.

- Thew, G., Gregory, J., Roberts, K., & Rimes, K. (2017). The phenomenology of self-critical thinking in people with depression, eating disorders, and in healthy individuals. *Psychology and psychotherapy*, 4(90), 751-769. doi: <https://doi.org/10.1111/papt.12137>
- Thayer-Bacon, B. (1999). Closing the Split between Practical and Theoretical Reasoning: knowers and the known. *Educational Philosophy and Theory*, 31(3), 341-358.
- Van Manen, M. (1990). *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy*. London, Ont.: Althouse Press.
- Van Manen, M. (2014). *Phenomenology of Practice: meaning and method in phenomenological research and writing*. Abingdon, UK: Routledge.
- Van Manen, M. (ed.) (2002). *Writing in the Dark: Phenomenological Studies in Interpretive Inquiry*. London, Ont.: Althouse Press.
- Vargas, A. (2015). Evidencias del Pensamiento Crítico en las Clases de Ciencias Humanas en Bachillerato. *Education and Learning Research Journal*, 11, 26-44.
- Walters, K. (1994). Critical thinking, rationality, and vulcanization of students. In K. Walters (Ed.), *Rethinking reason: New perspectives in Critical Thinking* (pp. 61-80). New York: State of New York Press.
- Warren, K. (1994). Critical thinking and feminism. K. Walters (Ed.), *Rethinking reason: New perspectives in Critical Thinking* (pp. 155-176). New York: State of New York Press.
- Wielgus, M. (2015). Critical-Reflective Thinking: A Phenomenology (Unpublished Ph.D. dissertation). University of Kentucky, Lexington, Kentucky. Retrieved from: [https://uknowledge.uky.edu/philosophy\\_etds/6](https://uknowledge.uky.edu/philosophy_etds/6)
- Winch, Ch. (2006). *Education, Autonomy and Critical Thinking*. London: Routledge.

