

Teaching Critical Thinking from Richard Paul's Perspective

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Abstract:- A society like ours is always exposed to complex processes of change, where production and work modes are continually involved, where the professional profile and human behavior change, it poses the school always articulated and broad challenges and demands answers more qualified. Therefore, a school understood as a cultural system and the reproduction of pre-established social functions is anachronistic.

It becomes imperative to assert itself as a new school understood as an integrated training system that accompanies and favours choices more suitable to a complex and dynamic world, in which we live, which is capable of making its students know how to orient themselves in reality, round them, so that they know how to play a leading role and so that they do not risk being on the margins of social and democratic exclusion and of productive processes. A school that knows how to provide students with a grammar of reality operating an intervention of mediation, facilitation and cultural guide.

In order to achieve our objectives, to achieve the objectives proposed in this work, the argumentative method was used (Toulmin 2001; Kuhn 2001). We used, first of all, the descriptive method; in the second moment, the analytical method; and in the third instance, the theoretical reflexive method. But we also use sources from different authors who face this theme, following the evaluative and propositional method.

The work can be developed through an articulation in three parts: firstly, we will examine the different educational definitions and orientations in “educating to think critically”.

The primary objective for us is to clarify and focus the issue of critical thinking in the mind of a learner and a person endowed with this ability. Then we will highlight the importance and necessity of this skill for “students of today” and for generations to come.

In the second moment, we present Richard Paul's definition of critical thinking. And, also, we present the

elements of which they are constituted, their characteristics and their relevance to our life. The conclusions demonstrated that to teach critically in the 21st century, the didactic process needs to be remodelled. Paul proposes a reordering of traditional lessons based on thirty-five cognitive strategies. The reorganisation includes affective strategies and cognitive strategies: macro-skills and micro-skills that can be applied to any school subject and to all levels of education and training.

I. INTRODUCTION

A society such as the one we live in today, which is always exposed to complex processes of change, where modes of production and work are continually involved, where the professional profile and human behaviour change, poses ever more articulate and wide-ranging challenges to schools and demands more qualified responses. It is therefore anachronistic for a school to be understood as a cultural system and the reproduction of pre-established social functions.

It is imperative to affirm a new school understood as an integrated training system that accompanies and favours choices that are more appropriate to the complex and dynamic world in which we live, that is capable of enabling its students to know how to orient themselves in the reality that surrounds them, so that they know how to play a leading role and so that they do not risk being on the margins of social and democratic exclusion and of productive processes. A school that can provide students with a grammar of reality by mediating, facilitating and guiding culture.

It is therefore illusory to think that a citizen's cultural education can be completed in a classroom or over a longer or shorter period of time. In reality, a person continues to learn, even outside school and throughout life (lifelong education). However, it is in fact because of the complex, contradictory, continuously evolving reality in which we find ourselves that continuous learning cannot be left to itself: the risk is that it will produce a strong inequality between those who can interact adequately/proficiently with

the new productive systems, with the means of communication, with the ever-advancing technologies, between those who know how, so to speak, to redesign and qualify themselves to adapt to the new demands of the labour market, and those who do not have the appropriate tools to maintain their own economy and freedom.

From this point of view, it is urgent for the school to organise teachers so that they are in a position to continue learning in an autonomous, reflective, active, responsible and critical way, from the perspective of permanent education.

In order to achieve these objectives, students must first of all acquire not only knowledge, but above all skills and competences, including those of "learning to learn" (UNESCO, 2000), i.e. the mastery of a series of knowable categories that will enable them to continue learning in a way that is fairer and more appropriate for them. But how can this be done? What can educators do to support and develop this competence to acquire new knowledge and skills? One answer comes from studies of learning processes and in particular how to educate critical thinking.

Scholars such as Richard Paul, Linda Elder, and others agree that our cognition is built along reticular pathways: for each informational unit we look for a place in our mental map, such that it connects with the other links or nodes of our cognitive network, if such a linkage can be found, the new information remains solid in our brain and will be available for any need or eventuality and for further linkage, connection and application; and vice versa, if we do not know, so to speak, where to place it, that new information will be lost or will not find a fair user. Richard Paul holds that a well-prepared and skilled critical thinker is one who: (a) raises or raises substantive questions and vital problems, formulating them clearly and precisely; (b) gathers and evaluates relevant information, using abstract ideas to interpret and thereby effectively arrives at conclusions and problem-solving in a well-motivated way, in accordance with relevant criteria and "standards"; (c) thinks with an open mind within an alternative system of thought, recognises and evaluates, as necessary, the assumptions, implications and practical consequences; (d) communicates effectively with others to find solutions to complex problems.

In the light of such considerations, the main idea of this work is born to support the training process in the educational context, not only in reference to young people, but also addresses all professional figures operating within such a context, and in particular teachers and educators. In addition, it is intended to provide students with the intellectual tools they need for lifelong learning and to live a life as knowledgeable and responsible citizens, to sustain and develop the critical competences they so desire.

We therefore began this research work with the help of written works, which can be consulted with the author, and online material, having realised that there are specific studies in this field.

In order to achieve the objectives indicated above, we used, firstly, the descriptive method; secondly, the analytical method; and thirdly, the reflective-theoretical method. However, we have also used a lot of material and sources from different authors who deal with this topic, following the evaluative and propositional method.

The work can be developed through an articulation in three parts: firstly we will examine the different definitions and educational orientations in "educating to think critically". The primary objective for us is to clarify and focus the subject of critical thinking in the mind of a learner and a person endowed with this ability. Then we will highlight the importance and necessity of this skill for "today's students" and future generations. In the second phase we present Richard Paul's definition of critical thinking. We also present the elements of which it is made up, its characteristics and its relevance to our lives. We then articulate the understanding of critical thinking to demonstrate that it is an integral part of everyday life. Finally, we examine the strategies Richard Paul proposes for teachers to educate students to develop critical thinking and help them meet the challenges of a complex and rapidly changing world.

The work can be restated as follows: to teach critical thinking, it is necessary to criticise educational policies and their beliefs, and ultimately to develop a new concession to knowledge and learning. Educators should be asked crucial questions about the nature of knowledge, learning and the human mind. They should reflect on their thought processes, their learning experiences, their misunderstandings, their confusions, and their poorly examined beliefs. Educators should recall and analyse their own successes and failures and examine the concessions and assumptions implicit in their educational practices and then with knowledge develop their own theories and an education through which they analyse, evaluate and reconstruct their understanding of education and what it means to "learn".

Teaching to think critically becomes a real and proper opportunity for teaching, for valorising and enhancing the resources of young people that give life to a "virtuous and talented path". It is precisely the teaching practice and the subjects who teach that are the real resources to be cultivated. This can happen at all levels and degrees of education and training.

"The teacher should abandon, as far as possible, the traditional expository method, in which the role of the pupil is almost one hundred percent passive, and seek, on the contrary, to follow the active method, establishing dialogue with the pupils and stimulating their imagination, so as to lead them, whenever possible, to rediscovery." (Sebastião e Silva, 1975, p.11)

II. WHAT IS CRITICAL THINKING AND ITS IMPORTANCE?

Although most educators consider it important and fundamental in their educational action to have a subject, or a student who reflects critically and personally, much of the school experience focuses on the acquisition of important skills and knowledge turned to the external world. We learn to read, to write, to do calculations. Our education system seems to focus more on a curriculum of content, often to be memorised, than a curriculum that trains the mind to think in the right, dialogical or dialectical way. In a time when people could neither read nor write nor do maths, it was perhaps essential to retain things in memory. Without this mode, human beings could not know the world and understand the thinking of others living far away from it. But today that (almost) everyone can read and write, wouldn't it be better to teach thinking, reflection and to make reflexivity and creativity a fundamental part of basic education?

The school curriculum seems to be too focussed on a knowledge of the world and immediate things, and devoid of critical reflection; thus it does not help people to reflect on themselves and the way in which they can be manipulated from the reality around them, from others and from their biased way of thinking. Why does it fail to train and educate the mind to be freer from internal and external conditioning?

Personal well-being and social behaviour today require the development of abilities to understand ourselves, to be critical and reflective, and to develop healthy relational skills that help and support individual development.

A couple of years ago it was thought that the improvement of material living conditions would leave a person more time to reflect and think, but it seems (not so today) that reality proves us wrong. The road to wellbeing seems long and endless, and we do not seem to have given the right amount of time for the person to devote to understanding himself and his own life. However, understanding material conditions is fundamental to discovering the value of the human being, his originality, his possibility of giving meaning to his existence and thus finding a true human dimension.

Self-understanding and the ability to be critical are fundamental conditions for rediscovering one's own freedom, but also for solving problems that every human being lives with and, consequently, improving life. Self-understanding and good thinking are also important for the development of our relationships with other people.

Although human beings have the capacity to think and reflect, it seems very difficult for individuals to develop capacities for reflection and critical thinking on their own.

The relationships between people and, in particular, what teachers establish with their students in the classroom and the experiences they favour, directly shape the thinking of their students and even of successive generations. For this

reason, we can say that teachers are the ones who pass on "the art of thinking" to the young generations who will be the citizens of tomorrow.

What would happen if teachers were insensitive to the importance of their educational role of teaching new generations to think? The vast majority of teachers are certainly convinced that they know and can teach how to read or think critically. This is probably because the subjects focus the mind on a more concrete and sensible external world, or because the subjects are more concretely defined by the contents of written books, essays and recounts which often concern rigorously defined ideas, concepts or skills, while critical thinking is more suggestive and undefined; for all these reasons, teachers feel more insecure about teaching critical thinking. But what would happen if no one taught boys and girls this way of thinking?

However, the focus of teaching and learning seems to be on things, knowing their value and thinking. Critical thinking is often absent from the thousands of hours that students spend in the classroom.

Among the many consequences of this lack of critical thinking education is the loss of opportunities to develop the capacity to think and to fall into the most absolute relativism.

Often, after deep reflection, we ask ourselves whether our conclusions are logical, biased or flawed, whether they are safe or just opinions, and whether we can devote our lives to them or whether they are not worth our sacrifice? On this occasion, it is important to critically distinguish what is true or false. But what can we do if they can take control of our thinking. Our inner life is traversed by a huge amount of thoughts that need critical reflection, our actions that guide us to understand the meaning of ourselves, others and the world.

Experience makes us face a large amount of opinions, science is crossed by opinions of new theories and research, we are surrounded and bombarded with information and we have the need to understand which points of view are credible, attendable, we have the need to be critical and reflective people, and achieve a deep knowledge of the world and things. For this reason, we think that teaching critical thinking skills is necessary and should guide and promote a reflective mind.

From the perspective of developing a more effective curriculum, the promotion of higher-order or critical thinking seems to be marginalised or even underestimated in the school or educational environment.

Most of what happens in the classroom, higher order skills seem to receive little or no attention. When it comes to high order questions (such as those of critical evaluation), teachers often prefer to avoid investigating them, to search for an answer fearing that they are either too much work for students or are arduous or even not relevant.

Critical evaluation is seen as the most subjective and biased; teachers rarely ask students to sustain logical reasoning in order to reach a conclusion or explain a judgement (Ive, 1998, p. 35) or an idea, an opinion. Instead of helping their students to learn the tools that help them to develop higher-order thinking, teachers prefer to use information without going into the merits of assumption, implication or consequences. Still, it seems to us that today the important things regarding education and life are superficial and linked to the social reality in which young people live. There is evidence and fact that teachers tend to adapt traditional, transmissive teaching methods, in which students must passively receive and be able to say exactly what they have heard from the teacher or what they have read in the textbook or manual that the teacher has indicated (Schrag, 1988, cited by Olsen, 1995, p. 133).

In addition, in schools, it seems to us that there is a widespread conception that the student is a "vessel to be filled", in which to deposit the specialised and encyclopaedic knowledge to be known. Teachers sometimes categorise pupils as "mortally obtuse" infants who know nothing and will never know anything. Today, more or less, the school attaches importance to a superficial instruction or as the Brazilian educator, Paulo Freire states "Depository education" or "banking", that education which does not concern students to the dynamic, unpredictable influx and the complex world where ideas undergo a continuous restructuring, re-tested and re-thought, where the need for diligence, precision and meticulousness are fundamental, where working skills must be continually updated and improved or even transformed - Albert Einstein said, if students are not learning what we teach, we need to change practices. Insanity is continuing to do the same thing over and over again and expecting different results - It seems that easily education is dependent on the political context or the most diffuse ideologies.

Teachers propose and interpret texts according to diffuse opinions, or even according to the interests of economic and political power, without taking into account that these texts are linked to decisive and debatable ideologies. Teachers often unreflectively and uncritically educate according to the wishes and will of those in power. We often see schools ignoring the need to educate for deep understanding or intellectual virtues such as critical thinking (National Research Council, 2012, p. 10).

Notwithstanding the reasons that the education system may lead to a poor quality of instruction, students - regardless of age, academic level or degree - find it very difficult to reflect (Pascucci, 2007, pp. 15-16). Although in the classroom they make decisions, face problems, formulate hypotheses, evaluate information and make inferences, the vast majority of students do not develop operational questions in an agile and systemic way, and especially when they are outside the school context, but often do not "transport" these skills outside school to the various realities of life. Between school and life, necessarily, there is a diversity that seriously questions, who in school endeavours to educate for life?

From all these considerations above, a series of questions arise, to which every teacher or educator would like to find an answer: why is it so difficult to teach a way to develop a capacity to think critically? How does teaching to think critically relate to the subjects that are taught at school? How can critical thinking be taught in the classroom in ways that students are able to do when they are outside the classroom? What are the characteristics of this mental activity and skill that facilitates knowing how to educate, control and evaluate? How can teachers be professionally prepared to educate to this skill? Is teaching critical thinking similar to teaching reading or writing or is it even a skill of different qualities?

There are many questions and we believe that in order to answer them it is necessary to tackle the various problems, starting with the definition of what we mean by thinking and reflecting critically.

The considerations outlined above are of great interest to those involved in the educational world, to the extent that they have led to the conviction that society today needs to be educated to critical thinking, which will enable it to face the potential development of the problems that lie ahead. The concern raised by the new development of society has led to a critical re-examination of what was being done at the various school levels.

It is now clearly evident that critical thinking involves an object to be thought about, and how to act when motivated decisions are to be made, or decisions that are to be informed. The need to make motivated decisions can arise in numerous types of problematic situations that a person must face: understanding a written text, controlling inferences, improving artistic performance, deciding how to act in a delicate social situation.

Critical thinking is sometimes contrasted with problem solving, decision making, analysis and research. Therefore, we deduce that in all these situations, we need to think critically. There are still an unlimited number of situations or choices where rationality is required. The term critical thinking, therefore, draws attention not so much to the process of problem-solving, as to the better solution, and thus the more apt decisions. Critical thinking is not a single form of thinking that is different from other types, but rather a quality of thinking that gets right what is best to do on the basis of the reasons it justifies.

Critical thinking is not negative or deviant thinking, nor is it judgemental thinking; it is distinguished from uncritical thinking - thinking that reaches conclusions without some evaluation of their merit or particular attention, not to arrive at a preconceived or unmotivated answer. For example, it is not important to note the differences of two opposing opinions if one is to note which is the more well-founded or certain. It is not important that two opinions are the same, but what is important is that it is rationally founded. Similarly, regardless of their particular position, we want to see that students' answers are critically

reflective and free of any prejudice, that their positions are clear and have evidence. The major challenge for educators, and particularly for teachers, in the classroom is to adopt practices or strategies that promote effective thinking by their students (Paul & Elder, 2014, pp. 1-2).

Critical thinking has had various definitions. However, many convergences and common characteristics can be found. This research provides the possibility to discover that the term "thinking critically" is not a generic word, but a richer expression of meanings. Thinking critically is a very important competence for the individual, for a group, as for society in general. It is not, however, correct thinking; some attitudes are indispensable for good critical thinking.

The best thinkers are those who systematically and carefully reflect by asking questions, trying to be in every way careful and documented, without allowing themselves to be conditioned by prejudices or personal, group or partisan interests, and investigate to arrive at the truth with patience and humility. No matter how difficult or easy the path to be travelled, but to think critically often also requires perseverance, commitment and resistance to fatigue.

Critical thinkers have a critical and comprehensive thinking eye on all points of view. They understand the plausibility of other points of view. Even more, they seek to understand diverse points of view and are in any case able to be empathetic towards other points of view that differ from others.

Many of us will not become more accomplished critical thinkers, but it is highly positive and constructive to reflect and learn what is useful to improve the future. It is also important to consider this path as a concrete possibility, but difficult in its realisation for this and future society, however, we believe it is not impossible.

The materialisation of critical thinkers necessitates the emergence of a critical society - a society that values critical thinking, which systematically rewards those who develop it. A society in which parents, schools, social groups, and the mass media cultivate and encourage it. When people develop their rationality in the face of irrationality on a large scale, in almost every field of knowledge and life, it is much less plausible that anyone will reach the highest possible level of development as a thinker.

But what can the process of critical thinking take as an interpretive guide, a model for improving ourselves and students? That is what we will try to do in the following sections.

III. RICHARD PAUL AND CRITICAL THINKING

We have already seen in the previous chapter that there are many ways of defining critical thinking, just as there are many ways of describing the meaning of any concept. But like any concept, for the field of research, for understanding or for reflection there must be a definition that guides reflection as well as educational action. In this chapter we

will introduce how Richard Paul defines critical thinking. And we will try to explain its characteristics and show what its relevance is for our everyday life. We will then pause to articulate our understanding of critical thinking, and then demonstrate that thinking itself is an integral part of our lives.

➤ *Definition of critical thinking*

In reading Dr Richard Paul's works, we do not find a single definition that he uses every time he talks about critical thinking. He often emphasises different and complementary aspects of other authors. The reason for this is that when Paul speaks of critical thinking, the best qualities of intelligence are manifested, and his way of expressing them is very varied. He himself states in his volume on critical thinking: "... from the moment that critical thinking can be defined in many ways that are coherent with each other we should not give too much weight to each definition Critical thinking is thinking you're thinking while you are thinking in order to render your thinking better. Two things are crucial: 1) critical thinking is not just thinking itself, but it is thinking that involves self-improvement and 2) this improvement derives from the ability to use the standard by which one evaluates the appropriate way of thinking. In other words, we can say that it is self-improvement (in thinking) through standard - which evaluates thinking" (Paul, 2013, p. 7).

Recognising that critical thinking can be expressed in different ways and that different definitions can be given of it, the collection of various definitions can help us to understand more deeply the complexity of the subject, the nature and the way of definition on Richard Paul's part. Scouring his publications, we have collected several definitions that seem significant to identify what he means by "thinking, or simply critical thinking".

In 1998, in an interview with Barbara Christopher reported in Word's Worth: A Quarterly Newsletter of the lifelong learning Network, to the question posed to the interviewer asking her to give a working definition of critical thinking, Richard Paul replied: "The first premise is that we as human beings by nature are thinking beings. Virtually every single thing we do is direct to our thinking. If there are tendencies that are built into the human mind to think narrowly, then those tendencies spill over into a good deal of our behaviour, our actions and decision-making, therefore diminishing the quality of that action or decision-making. Critical thinking takes place when people realise that the same thinking does not necessarily gravitate towards a low quality level. Rather, it usually gravitates towards a level of high quality. Thus, critical thinking is the systematic attempt to take thinking apart and recognise how it is working, evaluate it to know its weaknesses and strengths, and restructure it to make it better, thinking that improves thinking" (Christopher, 1998, p. 2).

In this definition we feel that some very significant elements are highlighted, namely: a) Critical thinking is founded and rooted in the close relationship between thought and action. According to Paul, although there is a

unity in the person, it must nevertheless be recognised that human beings are contradistinguished by the fact that their thinking, ideas and convictions guide and drive their behaviour. In any case, this quality distinguishes human beings from other living beings; b) despite the fact that thinking is what determines behaviour, human nature has not yet adapted the human being to perfect thinking. There can be "poor" thinking and "excellent" thinking. Because behaviour "depends" on thinking and there can be different levels of thinking, there can also be different categorical behaviours according to the qualities of thinking; c) "Critical thinking takes place the moment one realises that the same thinking does not necessarily gravitate towards a high quality level" (Christopher, 1998, p. 2).

Paul (2008) states that, "We all think" it is our nature to do so. But much of our thinking, if left alone is biased, distorted, partial, uninformed, of all things harmful. But the quality of our life is the fruit of what we produce, do or build, it depends precisely on the quality of our thinking. Neglected thinking is costly, both in money and in quality of life. The excellence of thinking, however, must be systematically educated" (p. 2). Critical thinking from this point of view can be considered the 'correct' thinking with which human nature is endowed in order to improve its thinking and consequently its behaviour. Several consequences follow from this argument. First of all, critical thinking is not a cognitive process that human beings are naturally endowed with. Nor is it a natural predisposition of the mind, rather one might say the opposite, because the tendency is to be low-profile, and this is "poor". Critical thinking is, on the contrary, thinking how to think by discovering the points of weakness, the points of strength and insurance in order to "yield" better.

In the Journal of Development Education, (Paul & Elder, 1994) define critical thinking by referring to the world of thinking of a person who takes responsibility for thinking in a certain way: "Critical thinking is understood as the ability of thinkers to take responsibility for their own thinking. It requires them to develop safe criteria and standards for analysing and accepting their thinking and to habitually use these criteria and standards to improve its quality" (pp. 34-35).

In this definition, more than the justification and the need to be critically gifted, it is evident that the ability of critical thinking is a responsibility: "The thinker must take his own reflection to heart". In this sense, the critical thinker should have an attitude of responsibility towards himself, recognising his own tendencies against self-centred thinking and controlling his own thinking with wisdom and sagacity. But "responsible" thinking does not escape a second consideration, which we could say is "objective": how can we distinguish correct thinking from thinking that is not correct or critical? The second part of this definition can be illustrated below. In order to be correct, a thought needs to develop criteria and standards that are safe to accept the defects of its activity.

In another source, Argumentation, Paul and Elder offer this definition: "Critical thinking is disciplined, self-directed thinking that exemplifies the perfection of thinking appropriate to a particular mode or scope of thinking" (Paul & Elder, 2014, p. 433).

In this definition, in turn, Paul rather than a suggestive aspect of the person, the answers to a question or any question, underlines that critical thinking should be honest thinking, that is, thinking characterised by being self-disciplined, reflective author in correcting one's own mistakes, in the way appropriate to a particular way of thinking.

In the volume, Critical thinking: Tools for taking charge of your learning and your life, Paul offers us a deeper and more complete definition: "Critical thinking is an art of thinking about thinking while thinking about thinking better. It consists of three interconnected phases: analysing, evaluating and improving thinking" (Paul & Elder, 2014, p. 1).

From this definition we can glean several aspects of critical thinking according to Richard Paul. Here are some of them: a) it is a disciplined, self-directed thinking that exemplifies the qualities of a thought appropriate to a particular modality or a particular content of thought. We could say that it is a form of metacognitive thinking to direct a sequence of operations that have a purpose of achieving a cognitive goal of safely yielding cognitive conclusions; b) the person demonstrates to know how to think critically while demonstrating the mastery of intellectual skills and abilities to accept one's own conclusions; c) critical thinking is that thinking that has as its purpose to improve one's own thinking in order to make thinking clearer, more precious or more definable.

Critical thinking can be distinguished in two ways, namely 'self-interested' or 'sophisticated' and 'impartial'. In critical thinking we use our thinking to adapt it to our successful thinking, the logical demands of a certain type or mode of thinking. To think critically, one must be willing to examine one's own thinking and subject it to certain rigid criteria. In critical thinking the subject detaches himself from his own thinking and observes it as an object, as an activity, or sees it in its own parts and how it has been constructed. To use a metaphor, he submits it to a microscope or is willing to analyse it in order to individuate the weak points and recognise the strong points. After having observed, to be critical, one must be willing to reconstruct one's own thinking or improve and overcome the biased nature of the mind to be rigid, to wish to confirm one's own thoughts in order to improve.

In order to think critically, a person must develop and take special care of his or her own thinking. According to the author in allusion, critical thinkers are like those who have a theory that explains or interprets a reality and what they know and apply it to their way of living in their daily lives. Whatever we do, we are always faced with many choices. Therefore, we need to have more and more

information to be able to make better choices. We need to understand what is actually happening in this and that situation. A good critical thinker is one who, with every possible choice, asks himself: "Am I taking care of myself in doing so? Am I deceiving myself when I believe this...? What security do I have in knowing that this is the best possible choice? What are the possible consequences if I decide this is wrong? If I wish to carry out, what is the best way to prepare myself? Is this the most crucial issue for me or do I need to focus my attention on the other?" Successfully responding to such demands is the daily work of thinking.

Nothing will guarantee that we will find the complete truth, but we know that there is a way to better reach it. To maximise the quality of our thinking we must learn to become effective at critical thinking. The mind must have a self-command that is alive and continually engaged in daily life to use reflection to better understand any situation in the world we inhabit, because how well or poorly we do so is crucial to our well-being (Paul & Elder, 2014, p. 2).

Consider for a moment all that we know about sport, money, friendship, anger and fear, love and hate, our mother and father, nature, the city we live in, customs and taboos, human nature and human behaviour. This learning came in a natural and inevitable way. We learnt through many ways and directions. One direction in which learning is unnatural is inner learning - the knowledge of self, the knowledge of how our mind works, how and why we think and how we operate to think. What do we learn about how to think? More precisely, how do we know how to analyse, evaluate or reconstruct our thinking? Where does our thinking come from? When does it become high quality thinking? When is it of poor quality? How much of our thinking is vague, confused, incoherent, imprecise, illogical or superficial? Do we know how to demonstrate a hypothesis? Do we have the knowledge of standards to determine when we are thinking well and when we are thinking poorly? Have we ever discovered a significant problem in our thinking and then had to change our way of doing things? If someone could have been asked to teach what we know about how to evaluate the effectiveness of any idea what would we say?

A critical person, not being like most people, will respond to any of these questions posed above by saying: "Beh, I think of not knowing much about my thinking or my thinking, I think of life as more or less discounting what I think. I don't know how it works. I have never really thought about this question. I don't know how to test it, and I don't know how it works either. I think it just happens in my mind automatically" (Paul & Elder, 2014, p. 3).

This way of thinking makes one realise how rare reflection is in many people's lives, how serious thinking is and how we think and see the role that thinking plays in our lives. We can also come to recognise how everything we do or feel is influenced by our way of thinking and it is surprising that human beings show so little interest in thinking. If you start to think as a botanist does, for example, when observing plants, you may be well on your way to

becoming a truly exceptional person (Paul & Elder, 2014, p. 3).

In order to understand how critical thinking was developed, one must recover some historical stages starting from the intellectual heritage originated through Socrates' teaching on critical thinking. Why the choice of this Greek philosopher, Socrates? The reason is very simple. It was he who called for critical thinking, highlighting the centrality of his teaching and his dialogues developed what is known as the "Socratic Method" or simply Socratic Dialogue, a method for teaching how to think.

In this chapter we describe the elements that constitute critical thinking. In addition we have listed the processes and highlighted how these require quality standards. We have also added that critical thinking is not just about thoroughly explaining critical thinking activities. These activities must be accompanied by attitudes that support them. This evaluation also allowed us to outline the identity of the good critical thinker.

The final challenge is thus a very high one that has introduced us to what will be the next section: How can we educate people to be "good critical thinkers"?

➤ *How to educate critical thinking according to Richard Paul in the 21st century?*

This chapter aims to fulfil the following objectives: to examine the strategies Paul proposes for educating students to develop critical thinking and thus help students to meet the challenges of a complex and rapidly changing world. Teachers not only have the task and responsibility of making students learn new knowledge and skills, but also of raising their students' thinking and reflective capacities so that they acquire a critical sense that prepares them to be responsible and active citizens in society and the world. Richard Paul offers us a concrete programme to achieve this goal. Although the author is very specific in his suggestions on how the teacher can and should intervene in a subject and on what to do to renew the school curriculum, we will endeavour to be faithful at the general level without going into the operational and practical issues of a subject and the specific contents which help us to see the broad outlines.

➤ *The teaching of critical thinking*

In the context of the transformations taking place, both in the world of work and in the education and training systems, the significance and category of critical thinking teaching seems fundamental. Critical thinking education is defined as a strategic and vital solution for the new generations, for economic and socio-political development in the face of the uncertainties and climate of insecurity that characterise the current economic, social and cultural situation; but also for the realisation of an organised and coordinated society made up of people who think.

In examining the various definitions of critical thinking in the first chapter and much in the second chapter, analysing the thinking of Richard Paul, one thing is evident to most researchers: critical thinking is not only about critical thinking skills but also about dispositions or

attitudes. On the basis of this premise we suggest that a new model of teaching should be proposed which contemporarily develops the skills of "asking questions, organising, interpreting, synthesising and understanding" and attitudes such as "courage, honesty, humility, autonomy and interdependence, confidence in one's reasoning abilities, etc.". This is an imperative today because society needs autonomous people who can walk on their own feet and think with their own heads in their work and the ability to know how to orientate themselves in a world that changes with great speed.

In this chapter we have concluded that the task of the teacher and the list of principles and applications described above have made us realise how not easy the process of a good quality teacher is in this task of educating to think critically.

IV. FINAL CONSIDERATIONS

We have learnt that we are facing an educational topic that is topical and of great importance for the life of each one of us, for each student, and for the teacher: knowing how to think critically. We set out to find a definition of this objective. Along the way, we came across various definitions emphasising different aspects. The various pieces of evidence we found along the way enabled us to see the complexity of aspects and processes. It is not for nothing that educational reflection is often placed at a high level with respect to other ways of reflecting and thinking. Its complexity requires general aspects such as: self-reflection, self-control, self-regulation, attention, and specific aspects such as: the ability to ask questions, draw inferences, evaluate, and investigate information. Due to its complexity, it seems to require a long time of education and educational care. But the complexity and dynamism of society seem to require citizens with this capacity and, consequently, teachers who are prepared and good at developing this educational activity.

We then enter the argument following the thinking of Richard Paul, an author who has for years devoted his entire efforts to reflecting on the argument for critical thinking and founded a centre on critical thinking in Sonoma - California. Based on his perspective, we describe how a mind disciplined to think critically can be described - a mind that takes responsibility for the quality of its thinking and continually seeks to improve its abilities. His definition of "critical thinking" led us to consider how critical thinking is a mental activity in which several elements can be distinguished, definable as cognitive processes that must qualitatively conform to quality standards.

However, a good thinker is not enough to develop all the processes in the right way. Precise and qualitatively reliable action must be supported by attitudes. It must, however, be internalised to the point where thinking acts as if it were routine. If we do not internalise our thinking effectively, it is of little or no use to us.

Successively we have tried to translate into practical didactic guidelines for educating to think critically. Paul's reflection is an extraordinary surprise for us, because Paul has proposed a very interesting picture of the professional teacher, but also, he has indicated numerous strategies at all levels that should be done. For reasons of space, we have limited ourselves to general indications: questions, macro-strategies and micro-strategies. His work could have been more specific by entering into arguments by simple discipline. From what we have just reflected on, we realise that authentic strategic thinking is a principle or an idea, and that it has practical implications for a course of action that aims to improve what we think, feel and do. Everything can be summarised in the following important question: how can I work on the important idea of thinking so that behaviour can change for the better? How can I from an abstract understanding improve my life by regularly moving into a strategic mode?" (Paul & Elder, 2014, p. 413).

If you want to promote the educational improvement of students, you need to educate them to critical thinking, because in contemporary society the labour market has become very selective, competitive, very precarious... Society requires the subject to combine high knowledge and diffuse skills, not memorised. Subjects feel inadequate to sustain an entry into the world of work or to remain given the context is highly selective and competitive. With careful planning and reflective application of present strategies, the teacher can make the classroom a very inclusive place and introduce rapid and effective didactic changes to meet the learning demands and challenges of all students.

To teach critically in the 21st century, the didactic process needs to be remodelled. Paul proposes a reordering of traditional lessons based on thirty-five cognitive strategies. The reorganisation includes affective strategies and cognitive strategies: macro-skills and micro-skills that can be applied to any school subject and to all levels of education and training.

REFERENCES

- [1]. Christopher, B. (1998). Critical thinking skills: An interview with Dr. Richard Paul. *Word's Worth: A Quarterly Newsletter of the Lifelong Learning Network*, 1-8.
- [2]. Elder, L., & Paul, R. (1994). Critical thinking: Why we must transform our teaching. *Journal of Developmental Education*, 18, 34-35.
- [3]. Paul, R., & Elder L. (2014). *Critical Thinking: Tools for taking Charge of Your Learning and Your Life*. Boston: MA, Pearson Education.
- [4]. Ivie, S.D. (1998). Ausubel's learning theory: An approach to teaching higher order thinking skills. *The High School Journal*, (8/9), 35-42.
- [5]. National Research Council. (2011). *Assessing 21st Century Skills: Summary of a workshop: J. A. Koenig, Rapporteur*. Washington, DC: National Academy of Sciences.

- [6]. Olsen, G.D. (1995). “Less” be “More” in the promoting of teaching. National Council for the Social Studies. *Social Education* 59(3), 130-134.
- [7]. Pascucci, M. (2007). *Come scrivono i bambini: Primi incontri con la lingua scritta*. Roma: Carocci.
- [8]. Paul, R. (2013). *Critical thinking: What every person needs to survive in a rapidly changing world*. Santa Rosa, CA: The Foundation for Critical Thinking.
- [9]. Paul, R., & Elder L. (2014). *Critical thinking: Tools for taking charge of your learning and your life*. London: Pearson Education, 3rd ed.
- [10]. UNESCO (2000). *Rapporto Mondiale sull’Educazione 2000. Il diritto all’educazione*. Roma: Armando.