

Images of the Future: Perspectives of Students from Barcelona

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Abstract

The relationship between futures studies and education is not new, but it is an essential element for the development of our society as part of a more balanced world. The aim of this paper is to provide a conceptual framework that describes the associations between future, human temporality and images of the future. The paper provides the results of research carried out among students in Barcelona, with analyses examining images of the future and their associations with other investigations. Using a four-part typology for images of the future, we describe differences between students' perspectives on the global future, and their egocentric perspectives on their personal future. The findings are indicative of specific activities to be undertaken to maximally benefit students of secondary schools. Finally, we demonstrate that the influence of technological and catastrophic images from the media is evident in these students, leading to a distorted perspective on their own future and their role in it.

Keywords: education for the future, images of the future, historical thinking, historical consciousness, teaching, secondary schools

Introduction: Research That Seeks to Respond to An Educational Need

Various research studies have been conducted into images of the future in different parts of the world. They provide an opportunity to analyse similarities and differences between such images of the future (Gidley & Inayatullah, 2002; Hicks & Holden, 2007; Hicks, 2006). For the first time, this paper describes research carried out in Catalonia – and Barcelona in particular – which builds on previous research (Anguera, 2011; Anguera & Santisteban, 2013; Santisteban, 1994) and complements similar work being carried out in other parts of Spain (Naval & Reparaz, 2008; Reparaz & Naval, 2008).

The current global economic and social context is very turbulent and rather unstable. Different authors have attempted to define the times in which we live as “liquid times” (Bauman, 2007), or as “post normal times” (Sardar, 2010), characterised by the three Cs: chaos, complexity and contradiction. It is even said that we are living in a new era called the Anthropocene (Slaughter, 2012a). On a local level, our natural environment is increasingly influenced by globalisation and interdependence, yet there are also calls for the protection of local cultures which help to differentiate us. There is a constant quest for balance between change and permanence.

Teachers are faced with a huge challenge: we have to prepare students for a complex and changing world; we must address not only different territorial scales, but also different temporal scales, with the future as a horizon of possibilities; we have to teach curricular content, but also provide moral and holistic training (Gidley, 2002b; Rogers, 1998) that equips students with the tools needed to make decisions and be active protagonists, responsible for improving society (Hicks, 2006).

A very important difficulty in developing competencies for the future is the images presented by the media, in which dehumanised urban landscapes dominate, controlled by machines and automatons, and with scant evidence of the natural environment. These images can be found in literature, in works such as *The War of the Worlds*, by H. G. Wells, *Brave New World* by Aldous Huxley, *1984* by Orwell and *Fahrenheit 451* by Ray Bradbury. They are also often used in the film industry, where films such as *Metropolis* (1927), *Blade Runner* (1982), *Terminator* (1984), *Matrix* (1999) and *I, Robot* (2004) present us with a modernised future dominated by machines. Other films have perpetuated this negative image of the future, but from a more environmental perspective – for example *Waterworld* (1995) or *The Day After Tomorrow* (2004).

It is difficult to recognize continuity with our own history and traditions in such images; they lead us to feel uncertain about the possibility of bringing about changes in the present. Images presented by the media appear to have a negative influence on young people’s participation in democratic life. Such images can also result in fear or denial: young people may ask themselves, “Why try to improve this world if it seems destined to have a negative or pessimistic future? Why fight for sustainability if it seems that we are doomed to ecological disaster? Why improve democracy if it seems that other types of power will predominate? Why work for peace if it seems that there is increasing violence in the world?” It is for these reasons that such negative images need to be counter-balanced with images of a preferable future, if we are to build a better world (Bell, 1997; Gidley, 2010; Hicks, 2006; Hicks, 2012; Sardar, 1999; Sardar, 2010; Slaughter, 2012b; Whitaker, 1997).

Some authors defend the function of these catastrophist or negative images, as transmitted by the media, because they believe they help to raise young people’s awareness of social and environmental issues; they believe such images provoke a reaction and have the effect of mobilizing citizens (Francescutti, 2003). This mobilization function could perhaps also be applied to teaching. But we do not believe that this is the best way to educate for the future. Nor do we think that the creators of these images and works have a critical or educational intention, as well as leading to despair.

This study originated with the observation that, in our educational setting, there is a clear lack of either futures content or any emphasis on the future in the teaching of geography, history and education for citizenship. These subjects help us to interpret the past, and simultaneously understand the present, in order to improve the future, but this is rarely explicit. Their subject matter lends itself particularly well to education for the future that prepares students for social change, and is consistent with democratic values. The lack of either futures content or emphasis on the future can critically influence students’ propensity for social intervention. Skills and competencies to foresight the future are not taught at any level in our education system. Geography, history and education for citizenship do not therefore meet their essential objective, which is to provide democratic, critical

and participative preparation in order to think and transform the society of tomorrow. This objective applies to all education, and was proposed by Toffler (1974). The present study focuses on these study areas in order to use their content to help students think about the future.

We present the results of research conducted with 16 year-old students in various secondary education centres in the Barcelona region. The students' images of the future were examined, followed by the development of a teaching unit to be used in the knowledge areas of geography, history and education for citizenship. We wanted to examine any changes that had occurred in students' ideas about the future after having performed various class activities.

The paper comprises three main sections: The first section presents the theoretical and methodological framework, and proposes a conceptual approach to education for the future. The second section describes the results of the analysis of students' images of the future, and the results of an education for the future teaching unit. The final section draws together conclusions from the research.

Theoretical and Methodological Framework: Proposed Conceptual Approach to Education for the Future

Proposed conceptual map

The proposed theoretical framework is intended to inform decisions about how we can bring about innovation in education for the future – in this case in the subject areas of geography, history and education for citizenship. We propose a conceptual approach that links images of the future with different forms of expression, and with human temporality, historical awareness, change and continuity. All of these ideas have been combined in a conceptual map (see Figure 1).

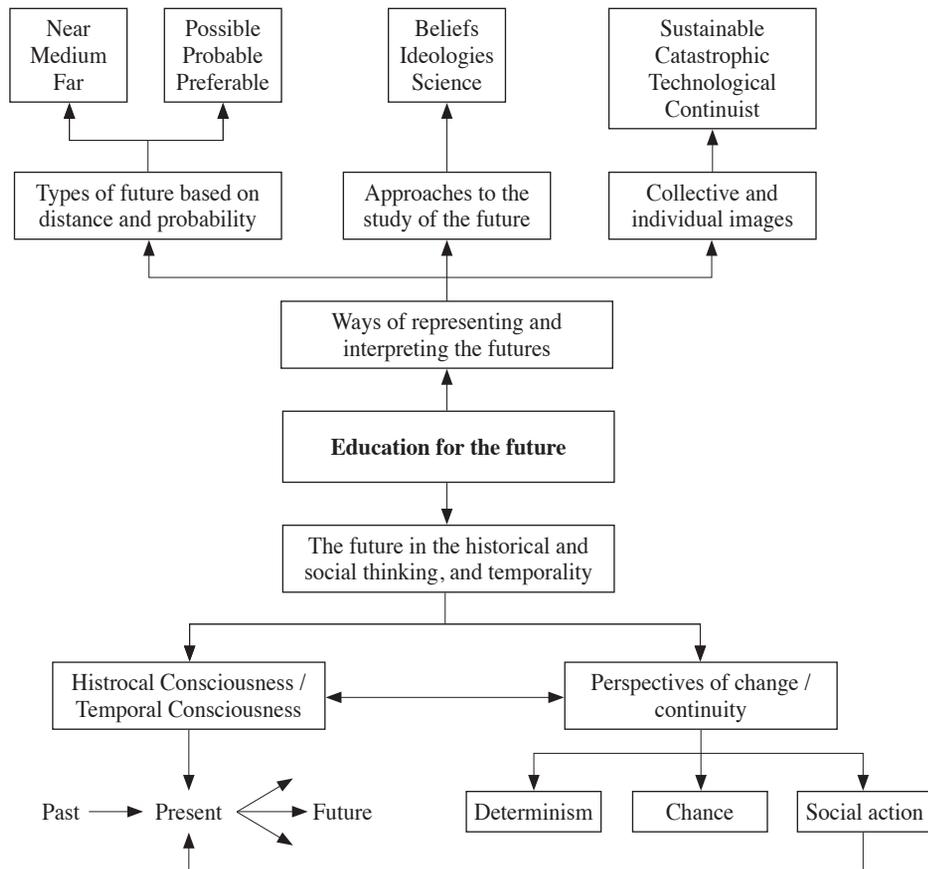


Figure 1. Education for the future: Conceptual map

Ways of representing and interpreting the future

The top part of the map focuses on ways of representing and interpreting the future, as explained in the following sections.

Types of future, based on distance and probability

From there we find two branches, related to what are known as images of the future or in a Francophone setting as social representations of the future (Audigier, 1997; Lautier, 2001; Moscovici, 1984). The first is about the type of future that we can imagine and, another, about the origin of these both individual and collective images.

First, we can define types of future, based on how human beings conceive the future, whether they are both individual and collective – i.e. its proximity or distance: the near future, which determines imminent actions; the medium future, which refers to the next 20-30 years; and, finally, the far or distant future, from half a century ahead and onwards (Von Weizsäcker, 1970).

Second, we can define types of future, based on the possibility of occurrence, and they work individually and also collective – i.e. the likelihood of something happening. We differentiate between possible and probable, and preferable. The preferable futures emerge once the other two have been assessed, and people look to achieve a particular set of value preferences (Hicks, 2006; Slaughter, 1988).

Table 1.

Distance	Near	Imminent actions
	Medium	20-30 years
	Far	Half century ahead and onwards
Probability	Possible	All the things that could happen
	Probable	Base on evidences, things that could really happen
	Preferable	Emerge once the other two have been assessed. Based on personal values

Approaches to the study of the future

The future has received a lot of attention throughout history, and across different cultures and civilizations. In general, we find that humankind has used three different approaches to the study of the future: a) those that come from beliefs, such as eschatology, Messianism or end-of-the-world myths; b) those stemming from ideologies, which can at times be recognized as utopias; and c) those based on science, such as future studies and forecasting (Pagès & Santisteban, 2008; Santisteban, 2007).

Collective and individual images

The collective and individual images of the future can be grouped into four different categories: sustainable, catastrophic, technological and continuist. This classification emerged from the results of various research projects (Anguera, 2011; Anguera & Santisteban, 2013), including this study. They correspond with scenarios Hicks proposed in order to explore sustainable futures (Dator, 1993; Hicks, 2006).

The future in historical and social thinking, and temporality

In the lower part of the map we consider aspects related to temporality. First, how historical consciousness, or temporal awareness, helps us to understand how the past has influenced the present, and continues to influence the future or possible futures (Rüsen, 2001; Seixas, 2006; Seixas & Morton, 2013). These futures open up before us and provide us with opportunities to make decisions.

Second, and as another aspect of temporality, the conceptual map addresses perspectives of change and continuity in history, because of events or decisions taken at that time. It is extremely important that students understand that: i) very important changes took place in societies in the past; ii) these changes have helped to establish important democratic values, including social justice; and iii) as a result, we can also imagine changes in the future, and think about how we can work to achieve them.

Three study perspectives can be observed in the analysis of change and continuity: determinism, chance and responsible social action or intervention. Many authors have studied the relation between these three perspectives. Individuals are thought to understand the changes and continuities of history through these prisms: i) *determinism*: everything is already written; ii) *chance*: we can't control events, so trust to chance; and iii) *social action*: through their actions, humans are responsible for all changes and continuities, so social action must be carried out responsibly in order to improve the world and the future (Bell, 1997; Hobsbawm, 1998; Luhman, 1992).

The future is, thus, one of three aspects of human temporality and of historical consciousness. It is important to understand that the past, the present and the future cannot be separated in the study of society. This point is very important in education, and in understanding social change and the

relationship between the past, the present and options for building the future (Hobsbawm, 1998; Slaughter, 1998).

The goal of futures studies is: *'to discover or invent, examine, assess, propose and know a series of possible, probable and preferable futures'* (Bell, 1997; Slaughter, 1998). Education for the future has mainly focused on geography and sustainability (Hicks, 2006), and many didactic proposals have been made in that sphere (Hicks, 1994, 2006; Slaughter, 2000a,b), in particular in the emerging academic field known as Education for Sustainable Development. There has been much discussion around concepts describing key competencies for sustainability (Rieckman, 2012; Wiek, Withycombe, & Redman, 2011). However, very little work has been carried out within the subject area of history, even though some historians consider the future to be an inevitable field of historiographical work (Hobsbawm, 1998; Voros, 2007). Our interpretation of the past in the present defines our representation of the future, although the macro-historic perspective is usually given insufficient consideration (Inayatullah, 1998).

An essential concept of history is historical change. The study of the causes and consequences of social change in the past is fundamental to education for the future, since it encourages us to believe that important changes can occur in the future (Inayatullah, 1998; Slaughter, 1994; Voros, 2007). It is for this reason that futures studies should be inextricably linked to historical awareness, and become an essential element in the teaching of history. The development of historical awareness refers to the acquisition of mental faculties, such as the development of foresight capacity and cultural reflections, that enable us to use the experience of the past to guide us in the present and project into the future. Historical awareness can be differentiated from historical memory because historical memory relates only to the past, whereas historical awareness considers temporality as a continuity that is projected into the future (Pagès & Santisteban, 2008; Rösen, 2001, 2010).

Methodological Framework, Research Questions, Techniques and Approach

In this paper we present the results of a research project carried out with three secondary education centres in Barcelona. They were selected as a representative sample of typical educational establishments in Barcelona, with each located in different geographical areas. These were a rural area, a medium-sized average town and a large city. We worked with a total of four teachers and 176 sixteen-year-old students in their fourth year of secondary education.

The research involved interpretative work aimed at improving the teaching of geography, history and education for citizenship, by incorporating the future into the content of their subject areas. The research used mixed methods, according to the goals set (Barton, 2006; Bisquerra, 2000; Pérez Gómez, 1989; Stake, 1998; Stenhouse, 1987; Taylor & Bogdan, 1986).

The research addressed four questions: 1) What images of the future do secondary school students have? 2) How can we categorise those images of the future? 3) How can we introduce the future into the subject areas of geography, history and education for citizenship? 4) Are students' images of the future modified after working with them in those subject areas?

The research techniques used were: questionnaires; focus groups; written work by students during the didactic programme; and observation of classes by the researcher. The observation of classes used an approach which focused mainly on student responses and attitudes towards activities, the difficulties they encountered, and how they solved them. Notes taken by the researcher helped to capture a more global and holistic perspective on the development and processes of the students.

In order to answer the research questions, the research was divided into two parts. The objective of the first part was to research students' images of the future, using questionnaires. To provide more qualitative analysis of the results, three focal group discussions of seven students each were

also held. This context and information helped us build a didactic method – specifically, teaching units – to change and improve the students’ images of the future.

The second part consisted in the development and implementation of a didactic method in education for the future, appropriate to the subject areas of geography, history and education for citizenship. This process was complemented with observation of classes – using a monitoring approach which focused on how students construct their concepts of the future – and three final focus group discussions of seven students each.

Data analysis used the grounded theory methodology. Based on the work of Strauss, theoretical referents were considered, but by using data interaction we were able to confirm the referents, complement them and draw our own conclusions (Kornblit, 2004; Iñiguez & Muñoz, 2004).

Results of the Analysis of Students’ Images of the Future, and Proposed Changes to Education for the Future

Students’ images of the future

Research into students’ social representations of the future was one of the main themes of the research work, and was based upon previous work in this area (Hicks, 2006; Hicks & Holden, 1995, 2007). Students answered a series of questions and performed a set of activities, under four headings: 1) concepts related to the future; 2) how history will evolve – both in terms of important matters and more general issues; 3) how different aspects of students’ personal lives will evolve when they are 35 years old, and how they imagine themselves at that age; and 4) possible images of the year 2050. The results were compared with results from focus groups, and the findings enabled us to design and adapt a didactic method.

Concepts related to the future

Students had to write words and ideas that the future suggested to them, based on their analysis of different images. Their responses can be classified into four types, based on the types of individual and collective images shown: a) *sustainable*, which imagines a better and sustainable future; b) *catastrophic*, which reveals a world on the brink of disaster; c) *technological*, with ideas of a highly modernised future; and d) *continuist*, with personal aspects taken from their daily environment.

Table 2 shows the results of this activity. We see that the majority of students have ideas of the future related to personal aspects similar to those experienced in today’s society. The other students, with very similar percentages in all three cases, portray an apocalyptic and highly modernised world, or reveal sustainable ideas of a world that will improve. Some of the students presented some contradictions and overlaps, sometimes they wrote things that could be fitted in two different categories, but there was always one which was most highlighted, that way we could categorise them.

Table 2. *Concepts revealed by the students*

Theme	Percentage	Students' ideas
Sustainable	16%	Improve the world, change some aspects, positive evolution, development of society; society, equality, democracy; research, progress, improvements
Catastrophic	21%	Human self-destruction; the end of the world, explosion, death; hunger and poverty; recession
Technological	17%	Robotics, engineering, information technology, economy; very advanced technology; everything will be robotic
Continuist (personal aspects)	47%	Family, mortgages; university, studies, work, family

How history will evolve

In this question, as the students were on their last compulsory course, they had to assess the possible future evolution of the history of humanity, and of their personal future, using graphical arrows – an activity adapted from French research from Lautier (1997) in this area. The questions were: Considering all of the things you have learnt about history, how do you think it will evolve? Considering how you have lived, how do you think your life will evolve?

To respond, they had to choose, in each case, between five options: a) everything will improve; b) everything will get worse; c) everything will stay the same; d) everything will go from one extreme to the other; or e) everything will be repeated in a cyclical manner. This allowed us to see whether students reveal differences when thinking about their *personal* future, as opposed to the *global* future (Brundstad, 2002; Rubin & Linturi, 2001; Toffler, 1974).

Regarding the future of humanity, the majority of answers were situated between “everything will go from one extreme to the other” and “everything will be repeated in a cyclical manner”. Almost one quarter of the students think that everything will improve, and only a very small number think that everything will get worse. However, regarding their personal future, almost half of the students believe that everything will improve. One third of the students think that their life will “go from one extreme to the other”, and very few students believe that their life will get worse (see Table 3).

Table 3. *The future of humanity and personal future*

	Future of humanity %	Personal future %
Everything will improve	3%	49%
Everything will get worse	22%	3%
Everything will stay the same	4%	6%
Everything will go from one extreme to the other	30%	30%
Everything will be repeated in a cyclical manner	41%	12%

How students' personal lives will evolve when they are 35 years old

In this question, which helped to shape their typologies, students were asked to choose how they imagined themselves at 35 years of age. The key aspects were: housing; the labour market; financial

resources; and type of family. More than 80% of students imagined themselves with a stable and well-paid job -- reflecting the studies they had completed -- with their own house, good financial resources, and a partner and children. Only one student out of 176 was catastrophic regarding his personal future.

Possible images of the year 2050

In this question students had to draw their city, or an aspect of it, as they imagined it in 2050. These drawings can be differentiated according to theme, and classified as: *Sustainable*, *Catastrophic*, *Technological* and *Continuist*. We note that the four types of image that students drew are very much in line with those proposed by Hicks (1994, 2006) and other researchers like Hutchinson (1998).

Table 4. *Drawings of the city of the future*

Drawing of the future	Sustainable	Catastrophic	Technological	Continuist
Percentage	15%	43%	25%	18%

Typologies of students

All of the answers which students gave – to the series of questions above – were justified and verified in focus group participation and discussion sessions:

“You see that the world is going badly, but not for me. It will go well for me, because that is what I want to happen. You must be thinking you’ll go to university and it won’t be of any use to you? It would be better if you thought you were going to be happy; you imagine everyday life as it is now, but you are being bombarded with ideas about climate change, and you think that your life will stay the same, but the world”.

The participation and discussion sessions enabled us to confirm differences between students in their thinking about the *global* future – of their country or city – as opposed to their thinking about their *personal* future – everyday aspects of life, such as studies, family, work, etc. – with the latter, everyday aspects, always having more optimistic results, in line with those demonstrated in other studies (Eckersley, 2002; Gidley, 2002).

Based on comparisons between the answers students gave in questionnaires and in focus groups, we turned to the question of student typologies, which were also used in the theoretical framework or conceptual map that we proposed above (see Figure 1).

It is important to note that no student corresponds one hundred percent to one category, but they reveal trends. Catastrophic students are the majority (see Table 4), compared to balanced percentages in the other three typologies. The results show the importance of, and need for, education for the future, as evidenced by the large number of students with rather hopeless and contradictory images of the future. This situation needs to be reversed with new approaches which convince students of their ability to make decisions and build a different future.

Table 5. *Typologies of students*

Typologies of students	Sustainable	Catastrophic	Technological	Continuist
Percentage	20%	39%	20%	21%

Education for the future teaching unit

Based on the analysis of students' images of the future, and bearing in mind other published materials from Hicks (1994, 2006) and Slaughter (2000a,b), a didactic method, made up of four sessions, was designed and developed to address education for the future with students. The approach was used in the subject areas of geography, history and education for citizenship, based on the official curriculum of Catalonia.

The first session was dedicated to identifying past-present-future temporal relations, and to analysing the significance of historical change and of continuities. The second session consisted of drawing a temporal map of the different historical eras – with aspects such as housing, food, art, power, etc. – and of imagining the evolution of these aspects in the future. In the third session, students projected what the future of humanity would be like from a utopian perspective, and they subsequently analysed and evaluated four images representing different futures.

The last session placed the students in a hypothetical future in which they had to solve a social problem and, to do so, were asked to relate their historical knowledge to the evolution of the problem in the future. This last exercise took the form of a historical account in which the aim was for students to show their historical awareness by relating the past to the present, and the present to the construction of the future.

Below, as examples, we analyse the results of some of the activities that were performed.

Development of a utopia

One of the activities consisted of imagining and writing about a utopia in small groups, allowing us to assess students' ability to construct images of the future. It began with the reading and analysis of two fragments of classical literary works on utopias: *Utopia* (1516) by Thomas More; and a fragment from *Brave New World* (1932) by Aldous Huxley. Both texts were used as an example for the students. Following the reading of both fragments, each group was given time to think about and discuss what an ideal world would be, and to write about it.

Based on the analysis of the results involving utopian content, one can identify three types of utopia:

a) A world “*conflicting with current society*”, in which students describe an ideal world based on changing the reality in which we live – living in a more just world, with equality in all areas: “*A world without inequalities between persons, without racism. A world without hunger, where all diseases could be cured. With a good educational system for all children...*”.

b) An “*adolescent world*”, in which students propose an ideal world based on the concerns and needs of adolescents, with more freedom and rights, especially from 16 years of age onwards: “*Houses should have domotic systems and robots that work for us. There should be a spa in each house for us to relax. The minimum legal age to drive should be 16*”.

c) Finally, students describe a utopia that considers that in any idea there is a degree of imperfection and, therefore, they believe that the “current world is ideal”. Some aspects need to be changed but we already live in an ideal world: “*We have realized that a world without violence, poverty or mortality wouldn't be a real world. What helps to*

build the world are the little imperfections, the little mistakes that help us to evolve both personally and as a society”.

We should add that in most of the utopias advanced technology played a key role. Looking at the results in Table 5, we see that the majority of utopias consider an ideal world to be one that contrasts with that which we currently have. These utopias provide solutions to problematic political and economic matters in today’s society. For example, the need for real democracy that brings an end to corruption and the privileges of certain classes, such as the monarchy; citizen participation and the right to have their voice heard; respect for diversity of all types; the importance of everyone being able to access a job and housing with dignity. Another element that appears in the utopias, and which is related to the current political context, is Catalonia’s right to vote for independence from Spain. Finally, regarding the development of the utopian activity, we noted that each group readily agreed to a common basis for their utopia. All of the main ideas about the future which students proposed were incorporated into their group utopia.

Table 6. *Utopia*

“Conflicting with current society”	“An adolescent world”	“We already live in an ideal world”
86%	7%	5%

A temporal map that includes the future

Another activity included in the didactic method was a temporal map, in which students had to represent the past and the future in drawings. The students had an A3 sheet grid; the rows were labelled with the different classical historical eras, and the column headings contained the five elements, or themes, of historical evolution that had to be represented: food, politics, beliefs, technology and urbanisation.

The students, organised into groups, had a series of images that they had to place on the mural, in the appropriate section or square, depending on the era (row) and theme (column). Once the mural was complete, they drew elements for the last row, representing the future (Pagès & Santisteban, 2008). The students did not encounter any problems classifying the images in each era, apart from some minor errors. However, as was clear from the class observation, students had more problems agreeing the main characteristics of each historical era, than they did with the future. Despite having clear views on how to represent the future, this section led to intense discussion, within the student groups, about the possibilities of change and continuity for each theme. This result is therefore suggestive of considerable educational potential.

With respect to food, the students think that fast and/or concentrated food will prevail. Political organisation will be dominated by wars and authoritarianism, but this trend is closely followed by groups that propose a future where peaceful co-existence is possible. As regards beliefs, some students believe there will be agreement between different religions, and some think that beliefs related to religion will disappear. The evolution of technology is imagined as being dominated by robots, flying vehicles and an increase in arms of all types. The urban context repeats this technological view of life, but some destroyed cities also appear.

The images proposed by the students illustrate the influence of the media, in that they reflect the predominant images they see in movies, in the news or on social networks (Santisteban & Anguera, 2013). But they also show the ability of some students to avoid stereotypes and defend a version of the future where peace, cultural and religious co-existence, and the creation of new alternative ways of thinking are all possible.

Alternate history

Alternate history is a historical approach in which an alternative history to that which we know is presented, based on a particular event. For example, the victors of a war appear as the losers, or a key historical person has a different life. In the resulting history, although consistent, historical facts or people can be replaced with hypothetically possible alternatives. Alternate histories are a didactic resource that enables us to reflect on history, anticipate different changes and/or possibilities, and establish links between the past and the present.

In this study we used alternate history as a resource to work on what we could call the “future-past”, i.e., a future that could have been possible at a moment in history, but that did not take place. Alternate history enables us to analyse a historical event, to explore the possible causes and consequences, and the possibilities that other potential futures had at that time. The historical event selected was the dropping of the two atomic bombs on Japan at the end of the Second World War. Hypotheses are developed on what would have happened if the bombs had not been dropped, and on how this would have influenced the current situation.

Based on their alternate history exercise, the majority of students believed that if the bombs had not been dropped, the war would have dragged on and there would have been more victims and more losses. Only a minority considered it a cruel and unnecessary act. Furthermore, the great majority thought that the US and its allies would have won the war anyway, since they were stronger in military terms. Lastly, they believed that today the main beneficiary would be Japan, which would have accepted defeat after negotiating better conditions. This would have meant that today it would be a power with even more influence at a global level. In the same way, some students felt that this alternate history would have avoided some of the terrible diseases which resulted from the dropping of nuclear bombs.

The map of the future

This activity was adapted from a study by a research group from the *Autonomous University of Barcelona* (González-Monfort et al., 2010). The ‘context’ for the exercise was a scenario of European recession in 2061. The students received an email from their daughter who had emigrated to Africa in search of work. In the email the 20 year-old girl asked them for advice on the ‘situation’ in which she found herself – similar to that which many immigrants have encountered upon entering countries in the European Union. The students had worked on the subject of migration throughout history, and the current problem of migratory movements, in particular at the borders with rich countries. The aim of this activity was to verify the students’ level of historical awareness, in particular how they used their knowledge of the past and present in a fictitious future, and how they assessed possible changes going forward.

The results were analysed on the basis of two factors that were contrasted and combined: a) *contextualisation*, or the ability to understand the context and situation, and to empathise; and b) *temporality*, or the ability to establish relations between the past, present and future. The analysis was based on that in the GREDICS study (González-Monfort et al., 2010) (see Table 6).

Table 7. *The map of the future*

		Ability to establish relations between the past, present and future				
		Only situate themselves in their present	Situate themselves in the fictitious present proposed	Situate themselves in the fictitious present and refer to the current situation	Situate themselves in the fictitious present, refer to the current situation, establish relations with the past and project into the future	Total
Ability to understand the context and situation, and to empathise	There are no references to the context or situation	32%	4%			36%
	There are some descriptions of the situation but they are imprecise and incomplete	34%	7%		1%	42%
	There is a good explanation of the context and situation	5%	7%	1%	2%	15%
	The descriptions of the context and situation are complete, and the student identifies with the case and shows empathy		5%		2%	7%
	Total	71%	23%	1%	5%	100%

As regards contextualisation, students found it difficult to relate the situation to a global and local context, and even more difficult to empathise. Table 6 illustrates how 78% of the students were unable to contextualise correctly. Only 22% made an acceptable assessment of the context and, of these, only 7% demonstrated an ability to empathise with the person they were representing.

With respect to temporality, the majority of students wrote from their present and did not display an ability to situate themselves in another fictitious time, which we could call the present-future, past-present or future-present. Most of the students (71%) thought about the situation from their current present, without considering the time the letter was written, their history or their own experiences. 23% of the students understood the proposal and were capable of telling a story from a fictitious present, but were unable to incorporate relations with history. Only 5% of the students established relations of continuity between the past, the proposed fictitious present, and the possible future and other likely futures.

If we combine the two coordinates the results are very poor: only 2% of students show both types of capacity – i.e. to contextualise correctly, show empathy for their fictitious characters, and establish temporal relations that indicate the development of historical awareness and citizenship.

These results seem to confirm the suspicion that the teaching of history, geography and education for citizenship does not convey this knowledge to students. The results also illustrate how, even after following a complete teaching programme about the future, students were unable to effectively project themselves into that future. If students are to gain an understanding of the future, based on an understanding of the past and the present, important changes will be required in both the subject matter content and the skills being taught. Introducing a simple teaching unit is not enough to improve or change students' images of the future.

Conclusions

The development of a proposed conceptual map of education for the future helped us to describe the necessary links between different types of images of the future, change and continuity, and human temporality. Our approach looked to establish a relationship between education for the future and the formation of historical awareness. Our conceptual map provided a starting point for incorporating students' images of the future – i.e. the social representations of students – with educational activities.

In answer to the first two research questions – “1) *What images of the future do secondary school students have?*” and “2) *How can we categorise those images of the future?*” – the results of our investigation into students' images of the future were consistent with those of studies carried out in other countries. One example was the classification of those images of the future into the four categories: sustainable, catastrophic, technological and continuist (Dator, 1993; Hicks, 1994, 2006; Hutchinson, 1998).

The results also confirmed the difference between projections of the *global* future – which were quite catastrophic – and the *personal* future, which were much more optimistic (Eckersley, 2002; Gidley, 2002). Some local issues, reflecting the current situation in Barcelona and Catalonia, were apparent in a small group of students, who drew a future scenario in which Catalonia had achieved independence from Spain. We believe this trend may grow, since the political debate around independence has gained credibility, with independence increasingly seen as a solution to economic recession (Santisteban, 2010).

As regards the last two research questions – “*How can we introduce the future into the subject areas of geography, history and education for citizenship?*” and “*Are students' images of the future modified after working with them in those subject areas?*” – we conclude that those education for the future activities, performed with secondary school students, have provided us with compelling results, given that when they think about the future they are conditioned by their current present. For example, when they wrote about their utopia, their ideal world was opposite to the one we have today (Eckersley, 2002; Gidley, 2002; Santisteban & Anguera, 2013).

A similar result was evident when students developed a time map where the future was treated as another historical period. The students found it very difficult to imagine possible future worlds which were different from theirs – whether better or worse. It is these perspectives which allow us to see the influence of modern media on students' images of the future. However, in other activities students posited a preferable future, with society characterised by co-existence, equality and peace.

The final activity was intended to assess the effectiveness of the didactic programme. Students had to imagine that they were adults in a fictitious future, with a daughter who had emigrated. The exercise was used to determine, among other things, whether the students could relate the past and the present – which they knew – to a future that was described, and whether they added any additional detail. The data suggests that the students did not contextualise the situation, as their

answers to the problem presented were naïve or unrealistic. It appears that they have not developed historical awareness, or used the knowledge acquired in the history, geography or education for citizenship classes. This shows us that a single teaching unit is not sufficient to improve students' images of the future.

This was the first work on the future for the majority of students and teachers involved. The teachers who participated gave very positive feedback on the activities carried out. In interviews with the four teachers, each mentioned that they consider it important to develop didactic methods which incorporate education for the future into the curriculum, both in terms of subject matter content, and in terms of a new methodology for teaching and learning. In the final focus group discussions, the students stated that their images of the future hadn't changed much, but all of them agreed how helpful it had been to incorporate the future in the subject areas of geography, history and education for citizenship. They asserted that these future-based considerations had given them much more confidence and many more tools to face today's challenges, and also gave them a broader perspective on future issues.

We can conclude by stating that education for the future is one of the missing dimensions in the teaching of geography, history and education for citizenship – certainly in the Catalan context. We cannot leave the construction of images of the future in the hands of the media, or subject to experiences outside the school environment. Images of the future are a fundamental aspect of education, if we are to foster democratic participation and social change.

A single didactic programme was not sufficient to improve students' images of the future, but it helped them to gain a deeper understanding of the relationship between past, present and future. Our results suggest that didactic methods like this are needed to incorporate the future into our subject curriculums. The results also point to the value of further studies, spanning more than a single teaching unit, such as a year-long project incorporating the concept of the future into the curriculum for geography, history and education for citizenship.

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