Future studies

Laura Branchetti

What are futures studies

“... study of postulating possible, probable, and preferable futures and the worldviews and myths that underlie them. There is a debate as to whether this discipline is an art or science. In general, it can be considered as a branch of the social sciences and parallel to the field of history. History studies the past, futures studies considers the future. Futures studies (colloquially called "futures" by many of the field's practitioners) seeks to understand what is likely to continue and what could plausibly change.”

1. History and threads in future studies

History of Future studies

1. World wars: future of the nations (1950s)
2. Club of Rome (1968): to analyse changes in the society, Limits to growth

   Intersection of population growth, resource availability and use, economic growth, quality of life, and environmental sustainability – referred to as the "global problematique"

3. The Hawaii program (1976):

   Courses in Futures Studies at all levels of education have proliferated
4. Controlled economies 1950s: nazionalization of industry

5. 1st International Conference of future studies (1967), World futures studies Federation (Paris, 1973)

5. Future as an holistic discipline: intellectuals; simulation and modelling

Historical steps

a systematic and pattern-based understanding of past and present, and to determine the likelihood of future events and trends

a branch of social sciences and history that aims at understanding past and presenting and at determine events and trends highly probable in the future

rather than one monolithic future, and the limitations of prediction and probability, versus the creation of possible and preferable futures

one of the most important evolution concerned the transformation of the goals of the future studies - and all the similar research programs like futurology, future thinking and so on: from the search for the precision in the description of future to predict to the creation of possible and preferable futures

Two mainstreams

1. *To investigate the future as a deterministic result of the relation between the present situation and our choices and behaviors*

It's thus important to know as better as possible the present and to act in order to see the world changing in dependence of our choices, forecasting more and more precisely the future world

2. *To develop competences to imagine and create scenarios and stories*

It's important to be able to project themselves in different possible futures and to imagine who we could be in the new world (our role, our everyday life, …). No precision is necessary!

Who is interested in the futures and why?

1. **Policy makers**: to make choices and forecast future problems to face (migrations, retires, ecological issues, wars, resources)
2. **Entrepreneurs** : to imagine in advance new market and financial trends or customs in order to choose what to produce and what human resources to look for
3. **Educators** to prepare students to face new challenges, to choose what subjects activities and topics are relevant in order to “prepare people to face the future that is coming “ or to imagine a new future
4. **Academics**: to produce new research (interdisciplinary or better a new field of research) and to interact with stakeholders who ask the universities to provide tools to investigate the future or strategies to be prepared to the future. They are interested in advanced skills of academics (data analysts, social sciences and economics experts,..)

Who futures studies are for?

Students

Enterprises

Nations

International committees

We are focused on studies **concerning students' relation with the future** as a formative possibility, a way to make sense of the present and a resource for teaching and learning

2. Methods to investigate the future

Anticipatory thinking protocols:
Causal layered analysis (CLA)
Environmental scanning
Scenario method
Delphi method
Future history
Monitoring
Backcasting (eco-history)
Cross-impact analysis
Futures workshops
Failure mode and effects analysis
Trend analysis
Morphological analysis
Technology forecasting

Prediction or creation: to forecast or to backcast

Prediction:

While ***forecasting*** – i.e., attempts to predict future states from current trends – is a common methodology, professional scenarios often rely on "***backcasting***": asking what changes in the present would be required to arrive at envisioned alternative future states

Both aim at describing and predicting futures in terms of present situations.

We are not interested in this for our … future work.

To open up present and past

Example: **Causal layered analysis**

This method, developed by Sohail Inayatullah, is one of the newest developments in Futures Studies. Causal layered analysis focuses on “opening up” the present and past to create alternative futures rather than on developing a picture of a particular future.

CLA

CLA is based on the assumption that the way in which a problem is formulated changes the policy solutions and the actors in charge of initiating transformations.

The key principle of the method is using and integrating different ways of knowing.

“increases the range and richness of scenarios; leads to inclusion of different ways of knowing among participants in workshops; extends the discussion beyond the obvious to the deeper and marginal; and leads to the policy actions that can be educated by alternative layers of analysis.”

Scenario planning

A scenario is not a specific forecast of the future, but a plausible description of what might happen.

Scenarios are like stories built around carefully constructed plots based on trends and events.

They assist in selection of strategies, identification of possible futures, making people aware of uncertainties and opening up their imagination and initiating learning processes.

Future history

A future history is a postulated history of the future. Some authors, for example science fiction writers, construct a common background for a fiction. The author may include a timeline of events for this history. The participants could pretend to be writers and construct a common future scenario.

Futures biographies

This method, also called futures imagining, aims to create individual imaginaries, to gather peoples' views on the future and to examine them in the study of collective future. Peoples' expectations and opinions are considered as an important indication of possible goals and to possible directions that can influence peoples' actions and in result steer the future.

3. Imagination of futures: Why do we want to do it?

To de-futurize or to live in the “rules” of possibility?

De-futurize: to predict in order to make the image of the future stable and decrease uncertainties

To “ futurize”: to make experiences of possible futures by means of bounded imagination (what roles for Science education?) in order to accept the uncertainity as a possibility and not to be totally afraid of the future events if we are not able to predict it exactly

Future thinking in science education

The World Future studies Federation has a comprehensive survey of global futures programs and courses. The Acceleration Studies Foundation maintains an annotated list of primary and secondary graduate futures studies programs.

Organizations such as Teach The Future also aim to promote future studies in the secondary school curriculum in order to develop structured approaches to thinking about the future in public school students. The rationale is that a sophisticated approach to thinking about, anticipating, and planning for the future is a core skill requirement that every student should have, similar to literacy and math skills

Journals

https://www.revistafuture.org/FSRJ
http://www.jfs.tku.edu.tw/?page_id=47
http://link.springer.com/journal/40309
http://www.journals.elsevier.com/futures

Reviews

http://cbup.ca/blog/a-reference-point-for-future-studies-review/
http://master-foresight-innovation.fr/wp-content/uploads/2012/06/WBellOverviewofFS.pdf

Jones et al (2011) Developing students' futures thinking in science education

Futures thinking involves a structured exploration into how society and its physical and cultural environment could be shaped in the future. In science education, an exploration of socio-scientific issues offers significant scope for including such futures thinking. Arguments for doing so include increasing student engagement, developing students' values discourse, fostering students' analytical and critical thinking skills, and empowering individuals and communities to envisage, value, and work towards alternative futures. This paper develops a conceptual framework to support teachers' planning and students' futures thinking in the context of socio-scientific issues. The key components of the framework include understanding the current situation, analysing relevant trends, identifying drivers, exploring possible and probable futures, and selecting preferable futures. Each component is explored at a personal, local, national, and global level. The framework was implemented and evaluated in three classrooms across Years 4–12 (8 to 16-year olds) and findings suggest it has the potential to support teachers in designing engaging science programmes in which futures thinking skills can be developed.

Paige & Lloyd 2016] Use of Future Scenarios as a Pedagogical Approach for Science Teacher Education

Futures studies is usually a transdisciplinary study and as such embraces the physical world of the sciences and system sciences and the subjective world of individuals and cultures, as well as the time dimension—past, present and futures. Science education, where student interests, opportunities and challenges often manifest themselves, can provide a suitable entry point for futures work. In this paper, we describe how we have used futures themes, concepts and techniques both implicitly and explicitly in our undergraduate middle school teacher education courses and, in particular, science curriculum and general studies courses. Taking a critical orientation to the past and the present in these courses enables the future to be more than a mere reproduction of the status quo and opens up a range of possible futures in the areas of current interest. For example, having studied middle school teaching and learning in mathematics and science, students explore the past, present and possible future of a natural part of a university campus. In a general studies course on the science of the Earth's atmosphere, students construct a normative futures scenario on living in a changing climate. One way to gain insight into an uncertain future is to construct scenarios. This technique has been used since the 1970s to bring issues of environment and development—areas with strong science content—to the attention of both scientists and policymakers.

Lloyd & Wallace (2004) Imaging the Future of Science Education the Case for Making Futures

In the last 30 years or so, science educators in the Western world have come to recognise the importance of the social and cultural context in which learning occurs (Cobern, 1993, 1994; Hodson, 1993; Leach & Scott, 2003) and have, through such movements as science, technology, society and the environment (Pedretti, 1997; Solomon, 1991; Solomon & Aikenhead, 1994) and the history, philosophy and sociology of science (Matthews, 1992), moved to embed these aspects in the science curriculum. Currently there is debate on ways of incorporating local and global political perspectives in the science curriculum for students in the compulsory years of schooling (Fensham, 2003; Hodson, 2003). The authors of this article suggest that the futures field of study is also a necessary and valuable dimension in science learning--not as an addition in the sense of more content but as a meta perspective (Slaughter, 1989). Their review and argument are not brand new (see, for example, Gough, 1982), but they feel it worthwhile to revisit and update what is being said about student images of futures, and the futures field of study, in the context of science education. This discussion is organized into four sections. In the first section the authors describe their own introduction to futures and comment on the status of futures studies in school curricula. In the second section they review what the literature and their own work reveals about what students think concerning possible futures, and the importance of these students' views. The third section provides a brief overview of the futures field of study with respect to its characteristics, its history and structure, and examines a subset of futures studies: critical futures. In the final section the authors examine futures in education with a particular reference to science education. They discuss how futures studies, and themes that arise from student images of futures, intersect science and, using a case example, outline how futures in education may contribute to effective and empowering science learning.