



# Anticipation: Teaching the Future

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## Abstract

The study of the future has been a discipline for just about 50 years now. The Hawaii Legislature established the Hawaii Research Center for Futures Studies, headed by Jim Dator, within the Political Science Department at the University of Hawaii at Manoa in 1971. Jib Fowles and Chris Dede established the first full graduate degree program in Studies of the Future at the University of Houston – Clear Lake in 1975. Both of those programs are still running, graduating hundreds of professional futurists, and they have been joined by more programs around the world. Isn't it time we included younger students in our discussion of the future? After all, it's their future more than ours.

## Keywords

Teaching • Education • Futures studies • Multiple futures

## Contents

Background .....	2
The First International Conference on Anticipation .....	2
Teaching the Future: The Rationale .....	3
Teaching Anticipation: The Foundation .....	4
Teaching Anticipation: The Principles .....	6
Teaching Anticipation: The Resources .....	8
Upper Elementary and Middle School Students .....	8
High School and College Students .....	8
Teachers and Administrators .....	9
Academics .....	9
Teaching Anticipation .....	10

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## Background

The study of the future has been a discipline for just about 50 years now. The Hawaii Legislature established the Hawaii Research Center for Futures Studies, headed by Jim Dator, within the Political Science Department at the University of Hawaii at Manoa in 1971. Jib Fowles and Chris Dede established the first full graduate degree program in Studies of the Future at the University of Houston – Clear Lake in 1975. Both of those programs are still running, graduating hundreds of professional futurists, and they have been joined by more programs around the world.

The future as a public discussion also got its start in the 1970s. Change was in the air, and the future was on everyone's mind. On the plus side, Alvin Toffler and Julian Simon painted a glowing picture of advancing technology and increasing prosperity into the indefinite future. On the other hand, Paul Ehrlich and Donella Meadows were warning of the unsustainable growth of population, energy, land use, and pollution. The World Future Society was founded in 1967 in Washington DC to give the general public a place to learn about, discuss, and even celebrate change. On the other side of the Atlantic, a group of academic futurists formed the World Futures Studies Federation in Paris in 1971 to critically examine the future and prepare for the many issues that change would bring.

Later on, the Millennium Project linked dozens of nodes around the world to study these issues, and the Association of Professional Futurists was formed in 2002 to serve the growing community of foresight professionals. At the same time, futurists began appearing as keynoters at conventions and offering workshops and certificate programs to educate those in business and government on the realities of the future and how to handle them.

As a result, futures studies on the academic side and strategic foresight on the professional side is now a small, but established part of our world.

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## The First International Conference on Anticipation

In that context, Robert Poli and his colleagues pulled off a brilliant move at their conference in November 2015. First of all, Poli organized a conference on the future without it being a “futures” conference – that is, a conference run by futurists. Rather he invited individuals from every discipline to come to Trento to describe how their disciplines dealt with the future, or Anticipation, as he called it.

Poli did not ignore Futures Studies entirely. He acknowledged that Anticipation was built on the foundation laid down by Futures Studies. What is more, one of the tracks at the conference was Futures Studies, amidst the social and physical sciences and many professions like business, engineering, and education. For the first time, Futures Studies was recognized as a distinct, but separate discipline within a conference on the future that was not technically a futures conference. Strange!

The result, was extraordinary: 400 proposals, 260 sessions, and 300 participants, the largest academic and professional conference on the future ever. Anticipation is

now another term for discussing the future in any and all disciplines, sometimes even within Futures Studies.

The difference between traditional Futures Studies and the new term of Anticipation is that traditional futures studies uses information and perspectives from all disciplines – science, technology, sociology, economics, policy studies, etc. – but Anticipation considers the possibility that each discipline might have an approach to the future that may or may not conform to how futurists approach the future. Whether that constitutes another discipline is an open question. Some traditional disciplines, like language, mathematics, and critical thinking (or more technically rhetorical analysis), cut across the whole curriculum. So, is Anticipation one of those, an emerging discipline that everyone uses to some extent, or is it Futures Studies, by another name, that all can and should use in their own discipline?

Poli was clear that he saw Anticipation as distinct, but he also said that he did not see any conflict between Anticipation and Futures Studies. There may not be a conflict because, in fact, they may be the same thing, like looking through either end of a telescope. Futures Studies is a small, but established discipline. Anticipation is a collection of how all disciplines approach the future. The differences are real, and it will be interesting to see how they live and evolve in the same world.

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## Teaching the Future: The Rationale

One session at the conference was on teaching the future. The point of that session was that Futures Studies has been successfully taught at the graduate level for 40 years now. It is now time that we start teaching the same thing, appropriately scaled, to younger students. Of course, the educators' imperative is that we only teach what we know. While we can now anticipate and influence the future in a systematic and rigorous way, as we teach graduate students and other adults today, most teachers have not been exposed to or learned that way. As a result, it will be hard to introduce traditional futures studies, much less those many other disciplinary approaches in the primary, secondary, and tertiary classrooms around the world.

The imperative becomes even more important if, as the conference showed, most if not all disciplines deal with the future in one way or another. For physical science, except for some chaotic and quantum systems, the future is predictable once the theories and the initial conditions are known. Social science, including even economics now, takes a more varied approach to the future since experience, assumptions, and values play such an important role in understanding and valuing the future. The professions draw their view of the future from their respective scientific disciplines. So engineers believe that the future is predictable, and managers and teachers usually do not.

The point is that, as educators, we should not leave a discipline's assumptions about the future implicit and unspoken. Every discipline should be explicit about how it is treating the future, and it should be part of every student's general education, just like language, mathematics, and history.

Not explicitly teaching these approaches to the future creates a curious and perverse conundrum in how adults and their organizations deal with the future. Everyone knows that “You can’t predict the future.” Yet society expends millions of hours and billions of dollars doing just that. Why do we waste so much time and energy on something we believe is impossible?

The reason is that students have never been explicitly taught how to deal with predictability and uncertainty in the future. In fact, the only discipline that explicitly deals with the future is physical science. There, the future of well-established phenomena is known within the limits of measurement error. History and the social sciences do not cover the future. In fact, one might believe that sociology teaches about social change at least, but one would be mistaken. A quick review of the top 10 introductory sociology texts on Amazon in June 2013 showed that all 10 had only one of 15 chapters on social change, and it was always the last chapter. (Which course ever gets to the last chapter?) Students learn how to deal the future only in physical science, using observations, theories, and calculations. So they apply science’s predictive model to the social aspects of the future whether it works there or not, because that is the only way they have been taught.

We should change that. We should teach every student explicitly about how to handle an uncertain and unpredictable future in every subject. We are doing our students a disservice by leaving it out.

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## Teaching Anticipation: The Foundation

Of course saying that we should teach the future is one thing; actually doing it is another. Teachers have a real problem here. How are they to teach something they do not know and have never been taught? Most teachers, math and science teachers in particular, can extrapolate trends, but is that the whole future? Hardly. But what else are they to teach here?

The problem is not that we have too few ways to teach the future. It is that we have too many – all learned implicitly in school, but never brought together nor explicitly challenged. Futures Studies stands ready to change that.

- Approach #1 – The future is predictable. As described above, we learned this principle in the only class that explicitly dealt with the future. Introductory students learn the certainties in science, not the uncertainties –  $F = ma$ ,  $F = Kx$ ,  $PTV = \text{constant}$ , chemistry, thermo,  $\Delta\text{Pop} = \text{Births} - \text{Deaths}$ , supply/demand. All we have to know are the equations and the initial conditions, and we can predict a value at any time in the future. Simple!
- Approach #2 – Of course, nothing is that simple. Historians and social scientists know that we do not have the equations for human behavior. And we know ourselves, by reflecting on history and even on our own lives, that the future is often not what we expected it to be. Whether we had the equations or not, surprising, unpredictable things happen all the time. But now we are confused. Is the future predictable, at least in principle, the way it is in physical science? Or

is it unpredictable and contingent the way it is in history? And what do we do when we are confused, particularly in school? We don't say anything. We don't talk about it. We don't raise our hand in class or at the office. It's a code of silence because none of us knows how to resolve that dilemma.

- Approach #3 – But it gets worse. We have been taught from our earliest years by our parents, our preachers, our teachers, and later by every motivational speaker we have ever heard: “You can be anything you want to be. You just have to believe it and work for it.” We know that's not true. But now we are really confused. Is the future determined by some deterministic or contingent machine that produces the future for us or do we have some influence on it?

Futures Studies resolves this conundrum, not by choosing one perspective over the others, but by choosing all three. Each view of the future is actually part of the real future, properly understood.

- Approach #1, the Expected future – The future is not predictable in any absolute sense, but there is momentum because it is heading in a particular direction. Just like physical inertia and momentum, bodies at rest tend to stay at rest and bodies in motion tend to remain in motion unless acted upon by a force. So in the social sphere, practices, institutions, customs, cultures that have been around for a while will probably be around for a while longer. And things which are changing in a particular direction will probably keep changing in that direction for a time. As a result, the most likely future is that we have what we have today, but more of it! It's what we *expect* to happen, and it's what professional forecasters will sell if you ask them.
- Approach #2, Alternative Futures – And here's where it gets weird. The fundamental principle of Futures Studies is that the future is not singular; it is plural. What a minute! Isn't the present singular? Probably. So won't the future be singular when it finally arrives? Yes, but it hasn't arrived yet so until it does, it is plural, multiple. As a result, we don't have to say that the future is the Expected future or any one of the plausible Alternatives. It's all of them! The future is plural, not singular. So the debate about which is the “real” future is futile. It's a waste of time. As long as one has a reasonable justification for something happening instead of the Expected future, it says in the mix. Stop the fight; end the competition about whose future is better or more “accurate.” Giving up that “real” future is one of the most important mind shifts required to approach the future in a realistic and useful way.
- Approach #3, the Preferred Future – This is where we come in. The world will do what it will do, with its momentum and its disruptions, but are we completely passive? While we cannot control the future (no one can!), we can influence it. But influence it to what end? That's where the Preferred future comes in. Among all the plausible Alternatives, including the Expected, which one(s) do we prefer? And what are the values that are enhanced in that future? We have a seat at the table of the future, and we should express ourselves there. Can we get

what we want? Not all of it, but certainly more of it when we chose and work for it.

Shouldn't we be teaching our students these truths about the future? A teacher, parent or any mentor to young people does not have to have a degree in futures studies to teach these fundamental principles.

- The world is what it is, and will likely remain so for some time.
- What is changing in that world will probably continue for some time and create a future that we all expect to occur.
- But expectations are not reality. Something else could happen instead. The future is open and as yet undetermined until it becomes the present.
- Finally we are not passive by standers. We influence the future by our actions (and by our inactions), if even in a small way. We should exert what influence we have to make it a better for ourselves, our families, our communities, and for the world as a whole.

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## Teaching Anticipation: The Principles

The Association of Professional Futurists was established in 2002 to serve the emerging group of foresight professionals who are serving their clients and employers with this new approach to the future. The Association is quite small compared to the established professions, but it is growing steadily. Would that it become one of the established professions someday with the realization that every organization and indeed every individual needs to take stock of what is happening out there in the world and what they are doing to make it better.

The Association met twice in 2012 to discuss what its members stood for, what they believed, and what they did. No one needs to be a foresight professional to practice the basics of their approach. It's like financial literacy; ordinary people do not need to be accountants to balance their checkbook, save money, and understand what interest they are paying on their credit card and auto loan. So the list of what foresight professionals agreed were their core principles can be a starting point for a list of learning objectives for teachers in every profession to introduce this new and useful approach to the future.

- Use the best of what we know about **change** and apply it to understand the range of plausible futures and to make decisions and take actions that bend the trajectory of the future to toward our preferred future. See the future as the result of changes in the world (trends, events, and actions by others) coupled with changes that we create ourselves.
- Use the **widest possible scope** when considering the drivers of change. Take no source of change off the table because all the domains of change (Demographic, Technological, Economic, Environmental, Political, and Cultural) affect all the other domains in the long-term future.

- Dig deeply into the drivers of change, focusing on the **deep currents** that transform people and societies over the long run rather than the short-term changes that are here and gone quickly.
- Use a combination of **logical analysis** and **disciplined imagination** to understand where the future is headed and where it might end up instead. Synthesize these threads of change into the big picture of what the future could be. Don't worry that we do not have the depth of knowledge that an expert has. Rather concentrate on the ability to link the fields together into a coherent whole, something that few experts can do.
- Focus on the longest useful future, a future that allows for **significant and transformational change** to occur, whether by events in the world or by the actions of transformational leaders.
- **Disagree with the determinists** who say that there is only one worldview and one future. Accept that you cannot know, in a predictive sense, what will happen, even given the best that social science has to offer. Change the way you think about the future, from a single predetermined future to multiple, open futures that allow for creativity and choice.
- Believe that, since it is impossible to predict the future, **accuracy is not the best measure** of successful foresight. Rather foresight builds the capacity to learn about change as quickly as possible and to be flexible enough to respond to that change when it occurs in creative and effective ways.
- Recognize that **uncertainty** and **ambiguity** are an inherent and even a useful aspect of the future.
- Reflect on the **assumptions** that shape people's view of the future. Use empirical data to support your conclusions, but remember that data is not the problem in understanding and influencing the future. Rather, what people believe about the world and how it works narrows and constrains their thinking to only one slice of the future which often misses what actually occurs. Challenging assumptions is one way of revealing the other plausible futures that could occur.
- As a result, rather than ignoring uncertainty or even assuming it away, speak about the future in **multiple, alternative scenarios**. Handle the ambiguity and uncertainty inherent in the long-term future by becoming comfortable with and by ultimately using the contingent nature of the future as the best way to understand and to influence it. Build the capacity to understand that using alternative futures is the only valid way of thinking about the long-term future and use those alternative futures as the basis for creativity and choice.
- Make sense of the patterns of change (**sensemaking**) and how those patterns can lead to surprising and unexpected futures (**strangemaking**). For those who are fixated on a single future, make it strange and unusual; for those who are confused, help them make sense of it.
- **Create wiser, better futures**, by understanding what your vision is and how to achieve it.
- **Act consistently** over the long term toward a vision that includes ambitious goals, but in a contingent and flexible manner with the awareness of what is changing in

the world and the awareness of the effects that one's actions are having on the world.

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## Teaching Anticipation: The Resources

OK, that is what to teach, but how to teach it? That's the next step. Foresight is a new approach to the future, so teachers will need to learn that approach before they can teach it. Teachers are natural learners. They like to learn; they usually did well in school, and they like to share what they know with their students. Unfortunately, learning takes time and effort, and many teachers have little of that to spare. Nevertheless, here are a few tips for those brave souls who want to learn something new.

### Upper Elementary and Middle School Students

- *What the Foresight: Your Personal Futures Explored. Defy the Expected and Define the Preferred*, Alida Draudt and Julia Rose West, CreateSpace Independent Publishing Platform, 2016. A beautiful rendition of a consistent process for students to develop alternative and preferred futures. Ali and Julia wrote this book as the final project in their Master's degree in design and strategic foresight at the California College of the Arts.
- *The Futures Thinking Playbook*, by Katie King and Julia Rose West, *forthcoming Fall 2017*. A companion to *What the Foresight*, the *Playbook* is focused more on the macro changes going on the world. It is used as the basis of futures camps and other enrichment activities conducted by Teach the Future, a nonprofit to encourage and support educators who want to introduce futures thinking in their classes and schools.

### High School and College Students

- *Four Steps to the Future: A Quick and Clean Guide to Creating Foresight* by Richard A. K. Lum, FutureScribe, 2016. Originally designed as a simple way for organizations to use foresight, the book is useful for older students as well. It contains an excellent introduction to the basics of foresight in four sections – Past, Present, Futures, and Aspiration.
- *Teaching about the Future: The Basics of Foresight Education* by Peter Bishop and Andy Hines. Palgrave Macmillan, 2012. Drs. Bishop and Hines describe the futures studies curriculum at the University of Houston in text form. Most appropriate as a textbook for college educators and as a resource for educators.



## Teachers and Administrators

- *The Future: A Very Short Introduction*, by Jennifer Gidley, Oxford University Press, available June 2017. Explains the history of our conception of the future from the emergence of the theory of linear time in ancient Greece, and looks at the way human beings have prophesied, foretold, predicted, and controlled the future. Also introduces the field of futures studies, spanning social, cultural, and environmental innovations, as well as technological advances, and dispels some of the common misconceptions about the field.
- Bishop, P. (2011). A case for the future in the gifted-talented classroom. *Tempo*, 31(3).
- *Think Like a Futurist: Know What Changes, What Doesn't, and What's Next* by Cecily Sommers, Jossey-Bass, 2012. Shows how to track changes, explore questions, and engage in new thinking that connects today's pressures with tomorrow's realities.
- *Anticipate the School You Want: Futurizing K-12 Education*, Arthur B. Shostak, R&L Education, 2008. A million ideas about how to bring the future into schools.

## Academics

- Gidley, J., Bateman, D., & Smith, C. (2004). *Futures in Education: Principles, practice and potential*. Monograph Series, No. 5. Richard A. Slaughter (ed.). Swinburne University. A series of articles reviewing approaches and cases for teaching the future.
- Gidley, J., & Hampson, P. (2005). The evolution of futures in school education. *Futures*, 37, 255–271. Another review of foresight education by one of its leading practitioners.
- Bateman, D. (2012). Transforming teachers' temporalities: Futures in an Australian classroom. *Futures*, 44, 14–23. An in-depth case on teaching the future in an elementary school.
- Hicks, D. (2012). The future only arrives when things look dangerous: Reflections on futures education in the UK. *Futures*, 44, 4–13. A review of foresight education in the UK, but one of the UK's leading foresight educators.

Teach the Future has also assembled a Library of dozens of activities, lessons, units, and courses that teach the future at [www.library.teachthefuture.org](http://www.library.teachthefuture.org). Teach the Future will also begin offering teacher development workshops and student enrichment activities in late 2017 for those who want to start teaching the future. Go to [www.teachthefuture.org](http://www.teachthefuture.org) or contact the author at [peter@teachthefuture.org](mailto:peter@teachthefuture.org) to learn more.

## **Teaching Anticipation**

Whether Anticipation becomes a discipline in its own right or not is immaterial to this discussion. The point is that every discipline should examine and articulate its approach to the future, whether it's based on scientific principles or the inherent uncertainty of human affairs or on individual or cultural values and preferences. The emerging concept of Anticipation will contribute to this mandate by asking each discipline to take a position on how it deals with the future and to teach that to its students. In other words, the future might be too important to leave to the futurists.

Teach the Future!