

# Curriculum For The Future

Part 1: A workshop resource

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Version 1.2 February 2016



## What is *Curriculum for the future*?

*Curriculum for the future* is a set of resources designed to support open-ended, thought-provoking conversations about learning and curriculum today and into the future. The three resources can be used separately or together, and in any order.

- Part 1 (this resource) is designed to support modular workshop activities and discussions.
- Part 2 is the *Curriculum for the future* live action role play game.
- Part 3 is the *Curriculum for the future* digital game.

All of the resources can be found online at <http://www.nzcer.org.nz/research/curriculum-future>.

## Who are the resources for?

The *Curriculum for the future* resources are for anyone who is interested in taking a future focus to re-thinking the curriculum and ideas about curriculum more generally. We think the resources will be of particular use to school staff, or professional learning facilitators who are interested in creative ways to support teachers to challenge their current thinking about what they teach and why, and how teaching and curriculum might change over time. The resources can also be adapted for use with students, particularly the game components. *Curriculum for the future* may also be of interest to parents, school Boards of Trustees, and anyone with an interest in what happens in schools, and what and how young people learn.

## How should you use the resources?

Here are some suggestions about how you might use each of the resources.

### Part 1: The workshop resource

This workshop resource is designed for active use, whether you are using it just for yourself, or as part of a group. Every section includes at least one thinking activity or workshop process. After the thinking activity you'll find brief explanatory notes drawn from educational theory and research. Each thinking activity can be printed off or photocopied as a one-page handout, separately from the explanatory notes.

### Part 2: The role play game

The role play game is a fast, fun, research-informed, low-tech game designed to give players an opportunity to debate different ideas and possibilities for the shape of curriculum. In order to play the game, one person must take on the role of Game Moderator (GM). He or she is in charge of organising the game, keeping time, and is the official arbitrator for any questions about rules or protocols for game play. The GM should have good facilitation skills and a sense of humour, and

should read through all the instructions before the game begins to ensure he or she is familiar with the game. The game usually requires 45-60 minutes and it is useful to add on time for a debriefing discussion after game so that players can talk about the ideas and experiences they had during the game.

### **Part 3: The digital game**

The digital game is a one-player game, but two or more people can sit together while playing, to discuss and debate the choices that they make as they are playing the game. The digital game is a fun "entry point" into the ideas that are addressed in greater depth in the other resources. As with the role play game, we recommend setting aside time for a debriefing discussion after game, to see what kinds of ideas and conversations it sparked.

## **What could come out of using these resources?**

All of the *Curriculum for the future* resources are intended to open up thinking and conversation around some of the deeper ideas that dwell beneath the surface of our everyday thinking about curriculum, learning, and teaching. How effective the resources are in surfacing these ideas and sparking interesting discussions depends as much on how you choose to use them, as what is in them. We invite and encourage you to give us feedback about how you use the resources and what came out of it for you and the people you work with. You will find our contact details at the end of the resource.

## **Where do the ideas in this resource come from?**

*Curriculum for the future* draws on a large body of New Zealand and international research and theory, as well as questions and conversations we have had with teachers, students, parents, school leaders, and our peers in the educational research world. We have tried to weave together the thinking from these different sources in a way that is accessible, thought provoking, and supports creative thinking and conversations.

The various quotes given in the thinking activities on the following pages come from people's real responses to a short survey we posted online in early 2014. The survey asked four open questions:

- What is a curriculum?
- Who should create curriculum? (why?)
- Is it possible to teach or learn without a curriculum?
- Please list up to 5 key words or phrases that you associate with "curriculum"<sup>1</sup>

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<sup>1</sup> You can view the 50 responses to these questions here [bit.ly/1ri3hKo](https://bit.ly/1ri3hKo)

Our aim throughout this resource is to indicate some of the theoretical, research, and practice-informed ideas sitting behind this resource without making it too dense or academic. You will find more detail about the ideas this resource draws on in the explanatory notes that accompany each thinking activity. It is important to acknowledge that these notes only scratch the surface of a rich and extensive field of theory and research. Those who wish to go deeper should consider pursuing some of the further readings we suggest at the end of the resource.

# Thinking Activity #1

The year is 2054.

Dan, who's almost 5, wants to see the place where his big sister goes every day. You've offered to accompany him.

Dan opens the door and sees several people. He spots his big sister and runs to her.

"What are you doing?" asks Dan.

His sister tells him in a way she thinks he will understand.

"Why?" he asks.

She explains.



Photo courtesy of StockFreelimages.com

## What did Dan's sister say?

**Activity:** Individually or in groups, try to imagine what Dan's sister might have told her younger brother. If you like, write down your responses and read them out loud to each other. Discuss. You could take about 5-10 minutes on this activity.

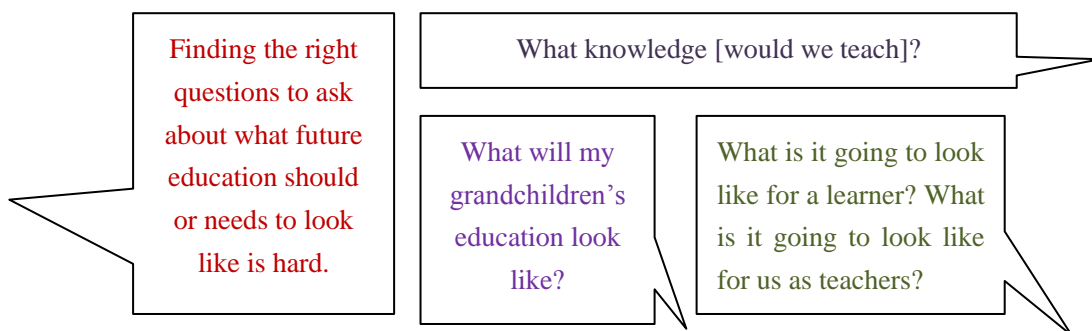
# Notes for Thinking Activity #1.

## It can be hard to imagine what learning might be like in the future.

In fact, it can be hard to imagine the future, *full stop*.

Sometimes we run workshops where we invite people to imagine education in the future. Most people find it easy to imagine what the learning spaces might look like, and what learners and teachers might be doing in those spaces. People suggest ideas about technologies that might be used in those spaces. Sometimes people say that schools as we know them won't exist and that learning will happen virtually or in all kinds of different places. Sometimes they suggest that learning in the future will happen by swallowing a pill or plugging into a matrix. Some people simply say, well why does it matter what we think? The future will be what it will be, and we won't be around to see it anyway, so let's just talk about what we'll do in our classroom tomorrow.

Whatever people say about learning in the future, often the hardest thing to pin down in these future-oriented imaginings are *what* young people would be learning - and why. These are the sorts of questions and comments we hear, and also grapple with ourselves:



We have developed this resource to help people think about these types of questions. The activities and content are designed to support rich conversations and creative thinking about the future of curriculum. The goal is not to *predict* the future, but to:

- explore different *possibilities* for the future;
- identify what sorts of possibilities are *desirable*; and
- help us to think about we need to do now in order to create the future we want.

This resource is not just about content – what we should teach and how – but also about process. Over the last few years we have been exploring different *ways* to engage in the difficult task of futures thinking. In this resource we aim to model and describe some of the approaches we have found to be effective in supporting this kind of thinking in relation to education.

## Why think about the *future* of curriculum?

Why not just focus on the curriculum we have *now*? This is a reasonable question. As you work through this resource you'll see that thinking about a curriculum for the future is virtually impossible *without* thinking about the curriculum as we already know it. This helps us to raise many important questions about curriculum that we don't always have time or space think about in our day-to-day practices. For example, what do we think a curriculum is? What is its purpose? Why do we need it? How does curriculum vary and change over time and space? Who should decide the curriculum, and why? Who decides what knowledge is most important to learn? Asking these questions - and revisiting them frequently - is something many schools already do as they continuously develop and shape their school curriculum.

Thinking creatively about a curriculum for the *future* is one way to take that thinking one step further. Stepping away from the business of today and trying to imagine the future can feel a bit like being asked to stare at a blank canvas and talk about what you can see. The blank canvas can be a little unnerving, but it also gives us a surface on which to project our current assumptions, beliefs, implicit and tacit knowledge, values, hopes, and fears. It is one way to get deeper into some of the "why?" questions that we might not have the time or space to fully explore when we are focussed on the demands and pressures of our day-to-day work.

Most people don't find it very easy to think about the future - even people who are professional futurists! There are many good articles and books that might help you to understand why educational futures-thinking is inherently complex. We have listed some of these at the back of this resource.<sup>2</sup>

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<sup>2</sup> A good entry into this literature might be to read articles from the 2014 Special Issue on Future Education of *Set: Research information for teachers*. <http://www.nzcer.org.nz/nzcerpress/set/set-2014-no-1>

## Thinking Activity #2

In education we constantly talk about curriculum, or "the curriculum", but what exactly do we mean?

Are we all talking about the same thing?

The word "curriculum" comes from the Latin word meaning running course or career - from *currere* to run. The transferred sense of having to do with a school's curriculum, is first recorded before 1913 (source: Chambers Dictionary of Etymology, 1998).

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**Write down at least 5 key words or phrases that *you* associate with the word "curriculum"**

### Activity suggestions

- If you are doing this activity as a group, share and discuss your lists.
- OPTIONAL: Look at the lists other people suggested on the next page.
- Using your group's words, or those shown on the next page:
  - Circle and discuss the keywords or phrases that you think are the most interesting.
  - Identify and discuss at least 3-5 *themes* that you can see coming through.
  - Identify any words/ideas you think are *missing* from these lists.
- Which keywords and ideas do you hope will still apply to curriculum in the future?
- Which keywords and ideas do you hope *won't* apply to curriculum in the future?



## Here's what some people said...

Progression	<b>Relevant</b>	Subject specific	Guiding framework
Vagueness	<b>Purposeful</b>	Dictatorial	Purposeful
Under-developed	<b>Motivating</b>	Limiting	Context relevant
Jargon	<b>Challenging</b>	Necessary?	Values based
Valuable	<b>Enjoyable</b>	Dated	Responsive and accommodating

<b>Education</b>	<b>Strands</b>	<b>Key competencies</b>	<b>Guidelines</b>
<b>Life long learning</b>	<b>Areas</b>	<b>Future</b>	<b>Mandatory</b>
<b>Job applications</b>	<b>Learning guide</b>	<b>Expectations</b>	<b>Unifying</b>
<b>Path to enlightenment</b>	<b>Coverage</b>	<b>Skills</b>	<b>Evolving</b>
<b>Order and progress</b>	<b>Levels</b>	<b>Framework</b>	

Compulsory	Life long learning	<b>Prescriptive of the stuff to be acquired by the learner</b>
Wide-ranging	Ever changing/developing	<b>State specified</b>
Sometimes irrelevant	Relationship dependent	<b>Mandatory</b>
Vague	Constantly present	<b>Overt vs "hidden" curriculum</b>
Socially biased	Doesn't only occur in classrooms or schools	<b>Accountability mechanism</b>

<b>Vague</b>	School	<b>Overt</b>	Describe
<b>Background</b>	Key learning points	<b>Hidden</b>	Define
<b>Teacher tool</b>	Not always logical	<b>Contested</b>	Facilitate
<b>Institution</b>	Educational constraints	<b>Power relations</b>	Extrapolate
<b>Crusty</b>		<b>Ideological.</b>	Theorise

<b>Objectives</b>	<b>Document</b>	<b>Objectives</b>	<b>Guidelines for student learning</b>
<b>Vision</b>	<b>Learning programme</b>	<b>Knowledge</b>	<b>Criteria</b>
<b>Learning</b>	<b>Vision</b>	<b>Assessment</b>	<b>Flexible for schools</b>
<b>Students</b>	<b>Key competencies &amp; values</b>	<b>Levels</b>	<b>School should have their own version within the guideline</b>
	<b>Learning outcome</b>	<b>Achievement</b>	<b>Can be restrictive</b>

## Notes for Thinking Activity #2

### So what is a curriculum *really*?

Defined most simply, curriculum is an *idea or set of ideas* that help us describe what people should learn. This is a very encompassing definition which allows for the co-existence of many

It guides what we teach. We can choose from it, we do not have to teach it all.

A curriculum informs you of what you teach and how it is taught.

Curriculum is.....a complex system or matrix of assumptions about human being that are then manifest in more-or-less purposeful and/or intentional practices associated with learning and development.

Curriculum is a learning pathway which should be designed and planned by both students and teachers and implemented both in and out of the school.

A curriculum is the set of milestones/ educational way points that teachers and other education members follow in order to do their jobs

It is what the government decides the schools should teach, it is what external assessment, e.g. end of year national exams, are based on.

A national curriculum is an overview or guideline for schools, teachers (and learners??) about the "what" and "how" of teaching - what is important to focus on, and how might this be approached or taught.

A local curriculum is how a school or individual makes sense of this.

In its broadest terms, it is a collection of diverse issues, which brought together, form a coherent whole. It may be used to illustrate the key aspects of an individual's life to date for example ( a curriculum vitae); or it may be used to gather together all those issues which are regarded as essential in order to educate a young mind (national curriculum).

A curriculum is a program of learning planned for the year.

From the perspective of a student the curriculum is the activities and interactions both planned and unplanned, between school, whānau and others known to him/her, that lead to the formation of values and competencies that are fundamental in determining how effectively they are able to be fully contributing members of New Zealand.

different descriptions and interpretations, as illustrated below.

## Why are there so many ways to define curriculum?

This is where a bit of knowledge about curriculum history and theory can help. The ideas below are composites from a wide range of curriculum theory and research. If you've formally studied education, or read educational literature for professional or personal interest, you'll probably be familiar with most of these ideas, but it's helpful to revisit them as a base for thinking about building curriculum for the *future*. For the sake of transparency, we (the authors of this resource) suggest why we think each idea is important to keep in mind as you start to think about building a curriculum for the future.

## Four things to know about curriculum

### 1. Curriculum is always multilayered and requires interpretation

When people talk about "the curriculum" they are often referring to a document like *The New Zealand Curriculum*, *Te Marautanga o Aotearoa*, or *Te Whariki*, but learners don't learn directly from these documents. They must be *interpreted* by educators and translated into experiences that support learning for students. In this process there are many decisions and variables that shape what any learner will experience as the "curriculum".

The academic literature talks about this in terms of curriculum having different levels or layers. These include, for example: the *national* or *official* curriculum, the *school* curriculum, the *classroom* curriculum (sometime called the planned curriculum). Splitting down further there are also concepts like the *learned* curriculum (what students actually learn, as opposed to what was planned) the *assessed* curriculum (what part of learning is assessed), and the *covert* or *hidden* curriculum - the learned norms, values, beliefs, or practices which learners pick up through the culture of the educational environment. The curriculum isn't just one of these layers or levels - it's all of them.

**When you think about building a curriculum for the future** we (the authors of this resource) think it's important to recognise that what gets written in official curriculum documents is important, but how people *interpret* and use those documents is equally important.

### 2. Curriculum changes over time

It's not just curriculum content that changes. There have also been big changes in what people think a curriculum *is*, and how it is legally and practically expected to be used. For example, prior to the 1990s there wasn't one "national curriculum" for schools in New Zealand. Instead, there were many different syllabuses, course descriptions, and exam prescriptions, some for primary, some for the lower levels of secondary, and some for each of the final three years of secondary

school. These various syllabus and prescription documents had their own histories and process for being updated, renewed, or replaced. There were also laws that further shaped curriculum, for example, by mandating how many hours per year schools were legally required to teach particular subjects. It wasn't until the passing of 1998 Education Amendment Act that an overarching document to outline at a high level what students should learn over the course of their compulsory years of schooling could be legally mandated. This allowed for the development of the *New Zealand Curriculum Framework* (1993) and later *The New Zealand Curriculum* (2007). These developments illustrate a general trend over time from a *prescriptive* model of curriculum - one which centrally specifies exactly what content to teach and how to teach it - to an *outcomes-based* model of curriculum, one which seeks to outline the high-level outcomes of learning, but provides much more flexibility for teachers and schools to determine how to achieve those outcomes through their school curriculum and teaching. In reality, curriculum as we know it is a hybrid of these two ideas.

**When you think about building a curriculum for the future**, we (the authors) think it is important to consider what kinds of legal and social frameworks might be needed to support curriculum in the future. How might these be similar or different to the frameworks that support the curriculum now? How might different legal or social frameworks come into being? What are the possible pros and cons of different ways of organising and regulating curriculum?

### 3. Curriculum serves multiple purposes

A curriculum never has one singular purpose, because formal education never has one singular purpose. Instead, there are many different reasons why society deems it important for everyone to have an opportunity to participate in formal learning. These include (but are not limited to):

- supporting learners' intellectual growth
- supporting learners' social and emotional development
- socialising learners into the values of their society
- preparing learners for further formal learning or careers in particular disciplines
- preparing learners for adult life and participation in economic and civil society

Educational theorists often point out tensions and conflicts that can arise between these different purposes, and how they affect the way we design curriculum. For example, can a curriculum effectively balance the need for all learners to learn "a bit" of everything, while also supporting some learners to go further and deeper in their learning in particular domains and disciplines so that they can follow a passion or a career interest? Would a science curriculum designed for potential future scientists be the same as a science curriculum designed for citizenship?

Being aware of the different purposes expressed in curriculum enables us to ask critical questions, for example *who* has decided these purposes? How should these purposes be balanced? What are the tradeoffs we need to make in achieving one purpose in order to also achieve another purpose? What do we do when we find tensions that are difficult to reconcile or ignore? How often should

we revisit the purposes underlying our curriculum to evaluate whether they are still relevant, or whether we are even meeting these purposes through practice?

The precise nature and mix of purposes a curriculum is intended to serve can and does change over time. Think about how curricula for girls' education have changed in the last 100 years with changing views on women's roles in society, for example. Sometimes these changes are subtle and gradual, and other times they are bigger, faster, or more hotly contested.

**When you think about building a curriculum for the future,** it is important to recognise that curriculum always has, and likely always will need to, serve a mixture of different purposes. As the world becomes increasingly complex and rapidly changing, new purposes for formal education, or new *variations* of existing purposes, may arise. These can be difficult to imagine until we get there, but even without knowing what those might be, we'll still face the question of how to integrate new or modified purposes with those that we already expect education and curriculum to serve.

#### 4. Curriculum is contestable

A curriculum is an expression of ideologies about what learning is for and what knowledge matters. Any curriculum will have critics and champions, and the same curriculum may be interpreted and viewed very differently by different users. In a democratic society, it's reasonable to expect that curriculum spans a middle ground, so that most - if not all - people are able to agree that what they value about education is available to all learners. Even so, a curriculum is inherently contestable. This is because (among other reasons) people have very different ideas/visions of how New Zealand society should grow and develop and what the role of education in that process ought to be.

Over time, the process of curriculum development in New Zealand as elsewhere has shifted from being mostly a specialised, centralised project where a fairly limited number of people decide what goes into a curriculum, to a more open project in which many people, including teachers, learners, communities, and people with many different kinds of expertise, have been able to contribute to the ongoing development and design of curriculum. This more open approach makes it more likely that more people feel a sense of ownership and investment in the curriculum as a joint project. However, some people feel that expert authority should have a stronger hand in curriculum development than it does.

**When you think about building a curriculum for the future,** it is important to consider by what processes that curriculum might be developed. Who should be involved? How will differing ideologies and viewpoints be managed? Should curriculum development aim for compromise and coherence between different values and perspectives, or should it allow for or enable diversity in use and interpretation, or both?

Suggested further reading is given at the end of this resource.

## Thinking Activity #3

You're so curious about curriculum in the future that you put your name into a national lottery to be cryogenically frozen until science has discovered a way to reanimate you. You are one of five people lucky enough to be selected. You end up eighty years in the future. The first question you have is "What year is it?". Your second question: "What's to eat?". Your third question is "So who creates the curriculum, and how?"

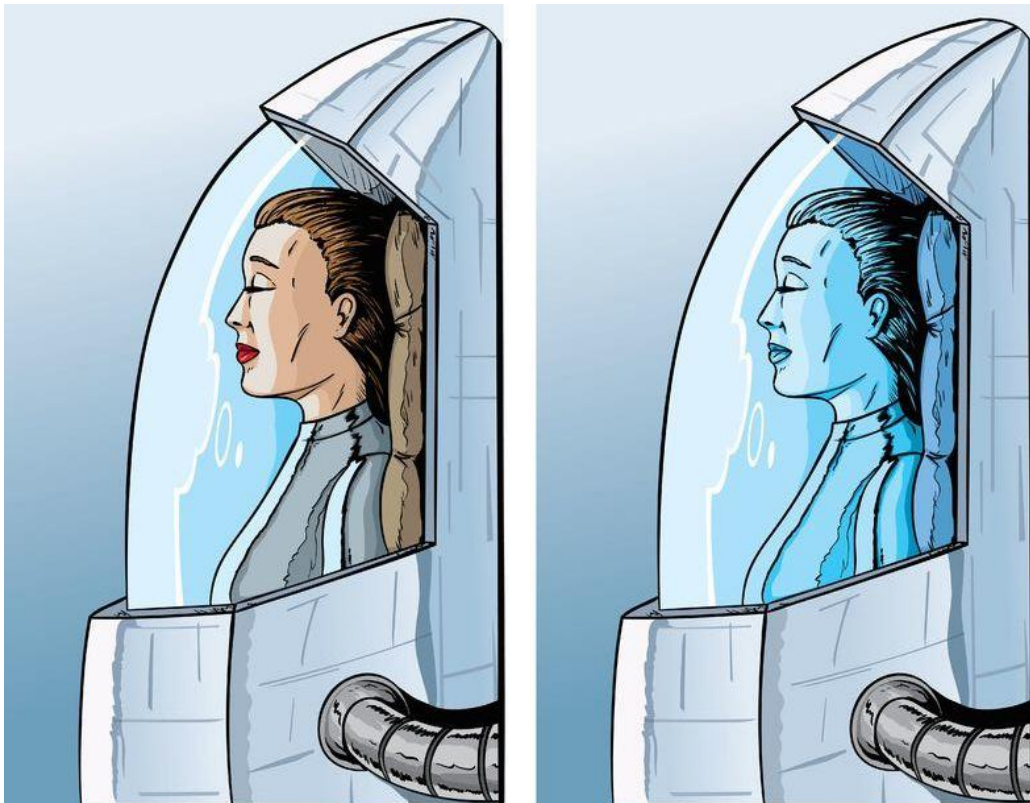


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### What do you find out?

**Activity:** Imagine what you discovered when you woke up 80 years into the future. If you like, write down your responses and read them out loud to each other.

# Notes for Thinking Activity #3

## Who should create curriculum?

The ideas from this activity will help us to explore our ideas about who *should* create the curriculum.

To a large extent, *who* we think should create curriculum depends on what we think curriculum *is*, and what it is *for*. If for example, we think a curriculum is a set of things to be learned, then we might argue that authoritative experts from different disciplines should shape curriculum. If we think curriculum is a vehicle for exploring our identities, or solving world problems then we might argue that *everyone* should shape curriculum. There are countless other variations we could list here; if you are interested in exploring these further we strongly recommend playing *Curriculum for the future: The Game!*

For every different idea about who should create the curriculum there are consequences which we may or may not feel happy about. For example, a more locally-based curriculum may lead to inequities because different communities may have less capacity to provide good learning opportunities for students. A principle-driven or ideologically-based curriculum may lead to some areas of knowledge being marginalised if this knowledge conflicts with the values and beliefs of the group.

On the next page are some quotes from different people about who should develop curriculum. You might like to pick one or two quotes and think about...

- The underlying assumptions about what a curriculum is, and what it is for, or
- The trade-offs, or concessions that would have to be made if the idea being proposed were to happen, or
- Who you think should develop the curriculum, and how this would work in practice at the classroom, school, family, community, and national levels.

## Who should create the curriculum?

Industrial bodies – they set the vocational standards that learners need to meet to be qualified in a field of industry.

Subject experts – they have the ability to use their expertise to inform others.

The learner – she or he may know what skill and knowledge is required of them to fulfil a specific need.

A board of teachers, education experts, and members of the national universities and higher education institutions to ensure that what we teach is up to date, accurate, and useful.

The MOE, as the impartial body with the resources and overview of the needs of students in this country.

Experts on world trends and future focus, to ensure our students are equipped with the skills, dispositions, and deep understanding needed to flourish, have great self esteem and be able to participate in important societal decisions.

Co-construction by all key players in a country – educators (policy, research, and practice), students, community groups and parents, employers, industry...

All sectors of the community should be involved as the curriculum will mould the lives of the next generation.

Professionally trained educators because they understand the emotional, psychological, socio economic issues which are all part and parcel of a young person's ability to learn.

Central Government/MOE to provide some leadership on society's longer term needs/desires for their citizens as educated, well rounded citizens with a learning disposition to face a very uncertain world.

Teachers because they are at the coal face and see the students and what they can do.

The MOE. Too much is left up to individual teachers and schools, so there is no fairness in what different students do across the country. Too many teachers put their own slant to what they teach.



## **Changing ideas about who should develop curriculum**

The fact that we are even able to have a conversation about who should develop curriculum shows how ideas have changed over time – from a more centralised ‘expert’ developed model to one that is inclusive of many more types of expertise and shared community values. The development of *The New Zealand Curriculum* (Ministry of Education, 2007), for example, was an iterative process that involved consultation with teachers, principals, advisers, lecturers, and students both face-to-face, and through on-line discussion, and the development of a series of position papers and discussion documents based on international research and theory.

## **Time to play?**

You could take the exploration of these ideas further by playing either the live action role play game or the digital game versions of *Curriculum for the future* to experience the complexities involved in debating different ideas and possibilities for the shape of curriculum.

## Thinking Activity #4

You are living in the year 2187 and have been given the task of researching how curriculum was organised in the twentieth and twenty-first centuries. You are surprised to discover that from the mid-twenty-first century to as far back as you can find records for, curriculum represented knowledge in groupings with names like "science", "English", "mathematics", "arts", and so on. It seems this system of organising curriculum was the same for all ages of children, and across much of what was then known as the Western world. You set off for the national archives in the hope that seeing some of the original curriculum documents might shed more light on this puzzling finding.



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### Why is this finding puzzling?

**Activity:** Imagine how curriculum is organised in 2187 and the reasons for this. You may like to discuss your ideas with a partner or small group.

Continuing your research at the archives, you discover that in the mid 21st century a small but influential group began a campaign against what they called the "overcrowded curriculum". They argued vociferously for reducing the number of what they called "learning areas" to just three. Unfortunately, the records from this time are fragmentary and you are unable to identify which three learning areas this group was campaigning for.

**Activity:** Imagine you are the group that was campaigning to reduce the number of learning areas to three. Which three areas do you argue for, and why?

# Notes for Thinking Activity # 4

## Organisation of the curriculum by learning area

Have you ever wondered why the curriculum is organised into learning areas? And have you ever wondered why we have the learning areas that we do? Why mathematics or science, and not anthropology or psychology?

There are historical reasons for the learning areas of the curriculum which stem back to the time of Plato. Plato's curriculum was designed to educate society's future rulers by exposing them to the greatest knowledge of their culture in the belief that this would develop their minds and the ability to reason. The world we live in today is very different from the one in which curriculum areas were first established but many of the curriculum areas remain the same. In *Catching the knowledge wave*<sup>3</sup> and *Disciplining and drafting or twenty-first century learning?*<sup>4</sup> Jane Gilbert and Rachel Bolstad argue that the main reasons subjects such as mathematics and science continue to be part of the school curriculum are to do with economics and the practicalities of mass education.

The *economic* reasons are that these subjects are based on forms of knowledge that are considered to:

- train the mind and build the capacity to think in rational ways;
- be high quality, and so produce high quality citizens;
- provide opportunities to learn the rules of thought and behaviour needed to belong to the academic disciplines; and
- provide the analytical skills needed by Industrial Age managers and professionals.

The reasons related to the *practicalities of mass education* are that these forms of knowledge:

- are easily broken into discrete parts and organised into a linear and hierarchical sequence of objectives that can be taught step-by-step;
- can be assessed in ways that appear to be fair—that is they can be judged 'objectively' and produce clear cut results;
- are difficult enough to fulfil the function required in an industrial age education system of identifying those with the 'ability' to pursue further study and obtain managerial or professional jobs. According to Gilbert, the function of sorting students can be seen to fulfil

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<sup>3</sup> Gilbert (2005)

<sup>4</sup> Bolstad & Gilbert (2008)

two conflicting requirements of industrial age education systems: egalitarianism (that is: providing an equal opportunity for all to succeed); and providing the human resource needs of a highly stratified economy—that is, those with basic literacy skills destined for lower skilled jobs and those with academic skills based on what is taught in universities.

However, in a post-industrial world, do we need to keep these particular areas of knowledge in the curriculum? And what sort of knowledge might we replace them with? Do we need knowledge to be part of the curriculum at all?

In an open online survey we asked people whether it would be possible to teach without a curriculum. The responses shown on the next page raise some interesting ideas about the role of knowledge in curriculum.

## Could you teach and learn without a curriculum?

Every pursuit has an objective of some kind, with associated knowledge, skills, and attitudes

To teach, you have to teach something (i.e., some stuff – the curriculum).

Without a systematic approach learners may or may not acquire the necessary skill and knowledge to fulfil specific criteria.

Concerns about chunks of learning being missed is the issue.

No...education would be potluck otherwise.

If learners are required to demonstrate a broad range of skill and knowledge, there is a greater chance that students will be successful in a pre-planned programme that can be shared with the learners.

We only know what we know, and this would be a very biased, watered down way to inform what should be learned.

It's important to have something consistent that is used to underpin an education system.

It is a good guide for coverage. I think you could if you needed to but [without a curriculum] there would be no consistency between schools as there is no guide.

I interpret this [curriculum] as a whole pile of just in case, disjointed, disaggregated, non contextual learning skills and knowledge. At best it delivers vessels filled with possibly useful information, but it doesn't grow the dispositions for learning founded on key skills and knowledge bases.

Some learning is dangerous without guidance from a highly informed teacher/instructor.

Without a curriculum every school and class would be learning different things which would not prepare them in the slightest for higher learning or the real world

As a school librarian, a lot of what I see in the library – science, English, social studies classes – is a waste of time. Perhaps not curriculum issues but teaching style or subject content.

## So, what about knowledge?

While the traditional purpose of disciplinary knowledge in the curriculum is being questioned, it is generally agreed that this knowledge is still important. There are however a range of new reasons *why* people think it is important, and these reasons are related to differing ideas about the purpose of education.

For some, the main purpose of education is to provide students with opportunities to develop the *capabilities* needed for lifelong learning. They argue that due to the rapid rate of change we can no longer predict what knowledge students of today will need in their futures, but we do know the capabilities they will need to access and use it. Such theorists argue that the main purpose of knowledge in the school curriculum therefore is to provide a vehicle through which such capabilities can be learnt. Alan Reid (2006), for example, proposes teaching *for* capability building *through* knowledge, and Lauren Resnik (2010) talks about the need for a thinking curriculum that is both high in cognitive demand and embedded in complex subject matter.

Others argue that the acquisition of disciplinary knowledge provides access to economic, social, and political privilege. It is therefore important that schools provide students, especially those from lower socio-economic backgrounds or non dominant cultures with opportunities to engage with this knowledge, as it may be their only opportunity to do so. Michael Young (2008), for example, argues that schools must provide all students with opportunities to acquire this “powerful knowledge”.

Others see the main purpose of school as being to provide students with opportunities to *create* knowledge. They see established knowledge as a useful resource for building *new* knowledge to help solve specific problems. Carl Bereiter and Marlene Scardamalia’s Knowledge Building Pedagogy for example (Bereiter, 2002; Scardamalia, 2002; Scardamalia & Bereiter, 2006) involves an orientation towards ideas as ‘things’ that are constructed, evaluated, and compared, rather than the truth to be passed down; an orientation towards ideas as improvable; and an orientation towards ideas as being held in the collective, rather than in individual minds.

Opening up questions about what knowledge to teach and why is a bit like opening Pandora's box. There are no clear-cut and easy answers but there are a lot of good questions to think about. For example, Chapter 4 of Keri Facer’s book *Learning Futures* (2011) offers some interesting ideas about how curriculum and teaching ought to address notions like collective intelligence, embodied knowledge, and even the challenges of “dangerous knowledge”.

You can read more about all of these ideas in the sources listed in our references and suggested further reading. Another way to grapple with these challenging questions about knowledge is to play either the live action role play or digital game versions of *Curriculum for the future*.

## References and suggested further reading

- Special Issue of *Set: Research information for teachers* on the theme of "Future Education" (2014, issue 1) featuring articles by Keri Facer, Sue McDowall, Andrew Gibbons, Kwok-Wing Lai, Alex Hotere-Barnes, Nicola Bright, and Jessica Hutchings, Sasha Matthewman and John Morgan, Susan Sandretto and Jane Tilson, James Dator, Senga White, Maurice Alford, and Karen Melhuish-Spencer.
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**Thanks for using this resource!**

**We'd love to hear your comments and feedback.**



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