

A WHOLE SYSTEMS APPROACH TO EDUCATION REDESIGN

A Case Study on the Need for Inter-Generational Perspectives and Inclusion

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Abstract

This study was commissioned by the Global Education Futures forum for presentation at its fourth International Conference in Moscow, Russia, from 29 February to 2 March 2016 (<http://edu2035.org/#program>). The objective was to conduct field research with a special focus on the vision of the future of education held by young people. This report presents some views and perspectives of my generation regarding what they want education to be like in the future. In northern California, my teachers Ms. B and Mr. Wahanik used the framework of questions and activities that my father and I developed to gather this kind of information by running a sort of “focus group” with my 10th Grade class and to find out what their views, perspective, opinions, ideas, hopes and concerns are regarding this theme. This group consisted of mainly 15 and 16 year olds, and there are around 40 students in my class. They had less than an hour to run the whole process, but everyone already knew each other really well so they could go quickly through the process, as described in this report.

A similar process was run with a group of young people in Buenos Aires, Argentina. Here I had to work with people whom I had never met before and who also didn't know each other at all. We had exactly 12 students from a variety of public and private schools with an age range from 12 to 17 years old. However, we had a total of three hours with them, so we could do an icebreaker and take our time to move through the whole thing.

In both cases (California and Argentina), the idea was to engage young people in a series of structured creative Future Thinking adventures that helped them “invent” what education (learning and teaching) should be like in the year 2035. The idea behind this is that educators and those involved in the systemic re-design of education systems might want to include this kind of data and these kind of perspectives in the work they are doing. I would like to present my findings at the ISSS and to see whether others think more of this kind of work should be done.

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Structure of Research:

The overall structure of the research process involved two major parts, one consisting in a series of core questions on educational futures and the other on a creative visioning process. In California case, the larger number of students allowed them to split into groups that could handle a series of five core questions. In the case of Argentina, the small group size required that we fold the last two of the core questions into the creative visioning exercise, thereby not losing any opportunity to gather critical data and allowing the group to work well together.

Part 1. Core Questions relating to the future of education (where "the future" refers to the year 2035 or thereabouts).

The first group of questions were about the kinds of things my generation needs to learn about.

- What is important to know so you'll be prepared for the future – why?
- What do you want to learn about? (We asked them what causes them the most trouble or annoys them most in their life today, and what doesn't exist in their life today that they really wish would exist.)

The second group of questions were about how we need to learn the stuff mentioned in the first set of questions.

- How do you learn best? (This question was about learning styles and preferred learning environments)
- What do you think teachers (if they still exist in the future – and if they don't, then what does?) could do to help you and others learn more and learn it better?

The third group of questions were about the learning system and what it should be like (how it should be structured and run).

- What do you think "school" (or the place of education) will look like in the future?
- Will "schools" still even exist?

The fourth group of questions were about what our dream education would be like.

- What would the perfect education look like to you?
- If you were in charge of education, what would you change/do/improve?

The fifth group of questions were about what we think the most likely education in the future is going to be like.

- What is most likely to happen to the future of education – why?

Part 2. Creative writing exercise

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This portion of activities was about aliens and humans. We split the class into two groups. The group that wanted to be the Alien Journalists had to imagine that they came to earth in 2035 and are reporting on what they see and what they think about it (for their fellow aliens back home on their own planet). The other group was humans who were living then, at that time (2035), and they had to describe how life is for them now and what they are doing. Then, after the two groups shared their descriptions, the whole class came back together to talk about the two perspectives and how they related to each other.

Presentation of Results:

Core Questions	California Group	Argentina Group
<p>What are the kinds of things our generation needs to learn about?</p> <p>1) What is important to know for the future - why?</p> <p>2) What do you want to learn about?</p>	<p>Financial literacy. Academic counseling - related to college. English - how to write. Practical life skills in classrooms. Exposure to other cultures. Public speaking skills. Note taking/study tactics. Acceptance of other peers. Empathy training through studying other belief systems, perspectives (religions, politics, cultures, languages). Learn long term effects of actions. Climate change. Current politics/public policy - how it works. Current affairs.</p>	<p>Different languages. Exposure to different culture. Life skills. How do deal with emergencies. Cooking. How to be independent. Basic medical studies. Technology classes. Practical skills. Learning how others learn.</p>

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<p>How do we need to learn it?</p> <p>1) How do you learn best?</p> <p>2) What do you think teachers (if teachers still exist - and if not, what does?) could do to help you and others learn more and learn it better?</p>	<p>Alone/small groups. Quiet. Not cramped. Pressure-free. Doodling and such is okay. Music while working. Class discussions.</p> <p>Yes, teachers probably exist in the future. Don't teach to common core. The no child left behind act should stop. Don't teach from textbook. Don't teach to test. Individualizations for students. Teach things that really matter - serious world issues such as war, climate change, economy... Less homework. Electives - more variety and choice in what you study. Anti-bullying in school.</p>	<p>Hands on activities. Visuals. More interesting lectures. Learning through computerized models and graphics. But not to the exclusion of books. Learning with attention to whether the student really understands.</p> <p>Teachers could explain things in a distinct way so that the students could understand the material better.</p>
<p>What is the learning system?</p> <p>1) What do you think "school" will look like in the future?</p> <p>2) Will "schools" still exist?</p>	<p>Either structured (like prison) or with more opportunities/options. Depletion of Catholic schools. More crowded. Not anymore technologically advanced than they are today. More Waldorf Schools.</p>	<p>Schools will be a lot more technology based. Virtual schools will be a thing. Universal access to schools.</p> <p>Schools will still exist in the future (all agreed).</p>

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<p>What's your dream education?</p> <p>1) What would the perfect education look like to you?</p> <p>2) If you were in charge of education, what would you change/do/improve?</p>	<p>Access to all types of technology. Variety of teaching styles. Contained working environment. Good connections with teachers. Four day school week (three day weekend). School should start later. Good food selection and financial aid for food. Equal opportunity for good schooling. Smaller homework load. Longer lunch. Learn about being adults - life skills classes. More field trips/interactive learning. All holidays for all religions get a break. Encouraged music/art/extra curricular. Low student to teacher ratio. Choice of classes. Emphasis on critical thinking. Mental health education. Teachers have no favorite students. More involvement in real world problems. Classes combining different fields (like science and history) with built in conflict, contradiction, and controversy.</p>	<p><i>[This question was folded into the next section of activities on creative writing from the perspective of the Future Human journalist group]</i></p>
<p>What is the most likely education?</p> <p>1) What is most likely to happen to the future of education - why?</p>	<p>Greater use of technology because books can't be updated and websites can. More students going to online schools. More funding, younger generation wants more education. Backpacks will still be a thing. Start teaching more technology classes.</p>	<p><i>[This question was folded into the next section of activities on creative writing from the perspective of the Visiting Alien journalist group]</i></p>

Creative Writing Exercise

Visiting Alien Journalist Group: The group that wants to be the Alien Journalists needs to imagine that they came to earth in 2035 and they are reporting on what they see and what they think about it (for their fellow aliens back home on their own planet).

The California Group came up with the following observations about the probable state of education in 2035:

- Information is stored digitally
- Specialized education based on what they want to do

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- World downhill and education diminished
- America destroyed (from Jason)
- Teachers more specialized and creative and more hands on
- Some schools have good education and some bad
- Polarized education, no middle
- High level will be
 - creative
 - differentiated to student needs and abilities
 - no cost
 - small classes (8-10 people)
- Low level will be
 - standardized (less personal)
 - taught by computers or highly computerized
 - large class sizes
- Hands on technology
- Computer science is a high priority
- Arts are optional classes or held as clubs
- Teachers called as surnames (Mr., Miss, Ms, etc.)

The Argentina Group came up with the following observations about the probable state of education in 2035:

- Virtual reality
- Most humans prefer advanced computer systems, some still use books
- Humans have evolved to include technology in their learning process
- They are not using technology to its fullest potential

Future Human Journalist Group: The other group is humans who are living then, at that time (2035), and they describe how life is for them now and what they are doing, also as journalists reporting on how things are.

The California group came up with the following observations about the desirable state of education in 2035:

(This group was divided into two so you will see two different lists)

One group:

- Majority of classes online, maybe a little school
- More flexible courses and requirements

Other group:

- Everyone will be bilingual
- Artwork and music more required
- Practical classes, i.e. cooking, driving, taxes, etc.

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- Requirement to live in a foreign country for 3 months before graduation
- Hands on experience for all

The Argentina group came up with the following observations about the desirable state of education in 2035:

- Elementary schools teachers teach the necessary basics to everyone
- The next grade levels after that expand on basics
- Required universal language is taught
- Regular communication/interaction with people of different cultures - practice for global/universal language
- High school is for focusing on exactly what classes you want to pursue
- Virtual simulation to test mental and psychological progress before graduation
- Strong focus on nutrition and physical education
- Basic learning such as cooking, CPR, financial responsibility

Large Group Discussion about connecting the two perspectives (human and alien).

California group:

- How not to lose human interaction due to advanced technology
- Students need to know more about what's going on in the world
- Throw creationism out the window
- Learn the alien language
- Make school open to more cultures including the alien culture

Argentina group:

- If people are still in situations where they need to rob and steal, they will not be able to learn the things we have pointed to
- People need to grow as people, as being really human
- Professors need to empower students not just to memorize but to be able to really express what they are leaning themselves
- That they are not only focused on technological realities but human values, too
- Not to forget how to work with books and notebooks - not everything should be virtualized

Discussion of Results:

Impression from California teachers of how the process went:

"It went OK. Nearly all the results are handwritten. We only had 40 minutes so what we did was split the class into 7 groups (about 5 students in each) and gave them one of the five

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questions or the future alien reporter (group 6) or the future human reporters (group 7). Afterwards they read what they came up with to the rest of the class and the rest of the class chimed in to enrich the answer. We spent 20 min brainstorming in groups, 10 min discussing answers to the five "Part 1" questions, and 10 minutes discussing aliens vs. humans. There were no strong difference between the aliens and humans, but I recorded the relevant responses to the final question. You will also find that because there were different groups some of the answers may seem to contradict themselves. There are some great answers, too. The limited time was a huge issue."

The Argentina Group went through basically the same process, but there were only 12 participants instead of 40, and they had 3 hours versus 40 minutes. The first set of three questions was run using an Idea Writing approach where we had three tables of four students at each and each table had 10 minutes to answer the question on a flipchart piece of paper. Then the paper was sent clockwise to the next table and they received the question with the answers generated by the group counterclockwise to them. So the questions moved around the room in a clockwise manner and eventually each group of four students had their chance to add to, comment on, or otherwise enrich the cumulative answers to the three questions. The Aliens and Humans creative writing exercise was run much the same way it was run in California.

Conclusions

Both groups agreed that practical life skills and exposure to other cultures are important things to have in our schools. Both also agree that in the future everyone is going to need to know a second language - or maybe we will develop a "universal" language.

Other important points included keeping the students up to date on current affairs in the world, that schools should focus on encouraging empathy and the ability to both listen and hear oneself and others, and also to teach financial literacy and how to deal with emergencies. My peers think school environments should be more interactive and more pressure-free. Music should be allowed, class discussions should be encouraged. Students want to be able to pick what they want to learn about - and there should be less homework. We think schools will be more technology based in the future, and yet that books, pens, pencils and paper won't disappear or be entirely replaced. We believe that school should start later in the day, should encourage music, art, and extra curricular classes. We think that schools may become more of an online system of learning - maybe a virtual reality, and that holographic proxies may serve as stand-ins for both students and teachers if they are sick or would otherwise have to miss class.

A few additional comments that I would like to make from my own perspective. I believe there are three key things to making future education better. It has to be made interesting, it has to be made understandable (and teachers need to check on this), and it has to be constructive to the life and environment of the student. Also, we need to place greater emphasis on learning about empathy and how to be empathetic, on appreciating and valuing diversity, and on connecting to and with nature.