Report on Environmental Sustainability

May 2015

Research and Development Team

Task Force on Recruitment

Members:

Andrea Reinsmoen-Stadler

Charge
The objective was to inquire into the topic of environmental sustainability and how it is integrated in various schools both urban and non-urban, as well as in non-school environments, to understand how it could be best integrated into ASB's infrastructure and curriculum.

Rationale

As we look at Trends for the future, we are seeing that "the urgency of sustainability is ingrained in every problem we solve and every issue we address in nearly every walk of life" (21 Trends for the 21st Century, p.240). We need to find a way to meet our present needs without compromising our students future. We need to equip our students with the tools to tackle every problem they will face by making the right decision for their well-being, for society, for nature, and for economy.

Our Mission, "We inspire all of our students to continuous inquiry, empowering them with the skills, courage, optimism, and integrity to pursue their dreams and enhance the lives of others", has sustainability all over it. As stated by many researchers and in the 21 Trends book, there are problems to be solved and our students need to be ready to inquire what the real underlying problems are and have the skills, courage, optimism, and integrity to find those leverage points that need to be tapped into in order to be able to pursue their dreams and enhance the lives of others by solving those problems and changing mindsets.

In the same way our Core Values, both Personal and Interpersonal talk about sustainability in each one of them, but most importantly we have, "we are trustees of the environment" and it's our "practice perseverance, and reflection (on our current practices) are integral to a culture of excellence."

Our new strategic plan has the following end result: 4.Cultivate a culture of environmental awareness and practices for sustainability. In November 2011 R&D made a recommendation which included the Design Patter 19: Daylight and Solar Energy, Design Pattern 20: Ventilation as well as Appendix p21-22 recommending these LEED Status questions to guide our thinking.

Commented [MA1]: Did the team identify the practical "practices" for sustainability or is it still open and not defined? Would be best to make clear what those practices are and have indicators for measuring their implementation and effectiveness. You could start with the Compass school self assessment to help the team think about which ones to focus on. For sure, we advocate environmental sustainability, but also actions in the other three domains, so that sustainability is not only seen as another term for "environmentalism."

Process – I'm in the still filling the highlighted parts

- School Visits
  - name the schools
  - discuss the culture
  - interviews/quotes
  - impact of their methods on learning

  A.
  - Academy for Earth Sustainability
  - Diverse project based learning & coaching programs that transform students to lead, innovate, engage and problem solve; to be agent of change for a more successful, sustainable future.
  - Students…
  - It has taken a while for people to understand that we are not here to make quick fixes. We need to ask them for patience as the outcome is a delayed one. However, we have managed to get over that hump and now that villages and organizations are seeing the results, they are coming back for more services.
- Non-school organizations
  - name the schools

- discuss the culture
- interviews/quotes
- impact of their methods on learning

A.

- Mumbai Farmer
- Urban farming is a better choice then our current farming habits, which use pesticides and other chemicals.
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- Explored models
  - name the models
  - discuss strengths and weaknesses
  - include quotes
  - (potential) impact (where it has been implements)

- Literature, trends, predictions

- During the past three months various approaches and models of how schools integrated sustainability in their school were identified, researched, and in some cases contacted. (Both urban and non-urban schools)

- During the past three months various models of non-school buildings were identified and visits were made to better understand how things were working. (only urban)

- Several courses on sustainability were looked into and the CompassEducation Model was chosen.

- Two members of ASB, Andrea Reinsmoen and Fiona Reynolds, took the Compass Education Online course level 1.

- One member, assisted the Compass Education workshop level 2.

- The Student R&D Copy was read and some of the members were approached to give more information.

Findings

Is sustainability just a "buzz" word that will erode?

Yes, sustainability is a word that is already starting to lose its meaning because of how loosely it has been used and the lack of understanding of how to get there. However, this does not change the fact that it is something that we have to do. The purpose of this recommendation is show how to successfully integrate it so it is part of ABS' DNA

Commented [MA2]: What would be the heading or topic here?

Commented [MA3]: These would be school based models? Maybe you can be more explicit with the types of models explored (e.g. classroom, service learning, other…).

As for data and evidence on impacts of Compass model, at this point we don't really have anything. We haven't ourselves been able to organize or commission any research. We just know that it is making an impact from the informal things that teachers are telling us. Certainly we should be reaching out to teacher practitioners to find out how they are using the tools (Compass, Pyramid Lite, systems thinking) and the impacts of doing so. This will certainly be topic of discussion in our November Strategic Planning meeting.

Commented [MA4]: Would you be interested in leading up this type of research? Nong and Nining, our CE administrative and communication team could be of assistance to you in identifying teaecher practitioners and schools and helping with initial contacting and communication.

Current teaching methods to sustainable environments

As I was looking into sustainability and trying to find the commonalities as well as identify what would work at ASB, something struck me. Linnea, my nine year old who is very interested about finding ways to live with nature, came back from having finished her water unit and said to me, “Mom, I want to die when I am fifteen.” I was in shock and had no idea where this was coming from. She then explained, “We just finished our unit on water, and I’ve calculated that if we continue living this way, by the time I’m fifteen there will be no water and that will cause a lot of other things that I don’t want to see.” So I continued to research about how others were teaching their units on the environment to find that several educational systems were using the doom and gloom method (Vanderheiden, 2015). It is labeled as their “hook” because according to a report by several green groups called Common Cause for Nature(2). “Provoking feelings of threat, fear or loss may successfully raise the profile of an issue,” but “these feelings may leave people feeling helpless and increasingly demotivated, or even inclined to actively avoid the issue.” People respond to feelings of insecurity “by attempting to exert control elsewhere, or retreating into materialistic comforts”.

What does it mean to a sustainable school?

The following was taken from COMPASS Education – School Sustainability Compass Self-Assessment pg. 2

> A Sustainable School is exactly that — **a school that practices and models sustainability in all aspects** of its mission, governance, operation, its engagement and relationship with the outside community, and of course, its curriculum, teaching and learning processes. In all it essence and practice a sustainable school understands and is focused on improving all aspects of student learning with a clear purpose towards them effectively participating and contributing to a better and more sustainable future for humanity.
>
> How can a school do this? As places of learning, schools can help students understand our impact on the planet and how to effectively address the challenges we face. And as models of good practice, they can be places where sustainable living and working is demonstrated to young people and to other members of the school community. Solutions to the world’s current and future challenges may be found in our classrooms and schools.
>
> A sustainable school provides a variety of dynamic and vibrant learning environments because it addresses real-life challenges in real places with real people. A sustainable school builds its good practices through a cycle of strategic policy formulation, goal-setting, planning, action and assessment. Moreover, school improvement measures increase opportunities for each individual student to realise his or her full

academic potential and to become an enthusiastic lifelong learner. A school that embraces sustainability focuses on the following:

- the social and emotional needs of students;
- values and respects diversity;
- supporting equity, fairness and inclusiveness for all members of school community;
- promoting healthy living, whole-person wellness and wellbeing;
- protecting and restoring the local and global environment;
- fostering students' confidence in their ability to make a difference in the world.

An Approach

Through my visits of several sustainable companies, I noticed an underlying pattern. While the buildings were sustainable in different ways, the mindset of the people in charge were the same. It was the mindset that was making their project a sustainable one. These entrepreneurs had thought deep enough about our current systems and mindsets and were ready to challenge the status quo. Do we need a fridge or do we need to keep our food cold?

See Research by Steven Sterling… which I will send to you. This may help in address the argument for whole systems sustainability, which Compass Education advocates.

As I researched further, I came across The Compass Education: http://www.compasseducation.org/ , a program that offered system thinking tools as a way to help think about sustainability from corporate board rooms to indigenous community programs.

I did their on-line course and attended a two day workshop. In alignment with watersfoundation.org, the compass education demonstrated how systems thinking not only benefits sustainability, but also has a positive effect on student learning.

To me, it seems like it is the missing link to the Design Thinking Henry Ford model we currently use in school.

Observation from others on non-environmental practices during January-May:

Throughout these months, staff, students, and outsiders, have shared their thoughts on things the school can change. I have added the three big topics that have arrised on multiple occasions.

The atrium AC hole into the Middle School is a common topic that many wonder about. How much energy is literally going out our hole? How much

money could ASB save by finding a fix? Students wonder if the middle school is cold because of the atrium hole.

At the ASB Impact, 5 different social entrepreneurs shared the feedback on how surprised they were with ASB's decisions on the usage of high quantity of printing on non-recyclable paper for the purpose of marketing. As a tech school, they were assuming we were more print-friendly.

Recycling group has observed that teachers print more paper that goes straight to the recycling basket in one week, then what a teacher collects in one week in a class of 60-100 students.

Recommendations for the curriculum & learning

- Train high school students (hopefully from the R&D group) in systems thinking tools
- Integrate systems thinking into the pedagogy by
    - giving student-led workshops on systems thinking to teachers and admin. This could be an 1hr30 workshop or during an 80min leadership class.
- Invite Compass to do a school-wide PD

or

- Send key people as a cohort to a Compass PD to then come back and share
- Train parent R&D in systems thinking to understand the tools and it's effectiveness
- Create a Systems Thinking PLC for our Tuesday Meetings in conjunction with the on-line course and maybe even a skype session or two with coaches from Compass Education.
- Create an intersession in Systems Thinking.
    - Pilot systems thinking in the DT class, 7th Grade Advisory (Environment theme), in an elementary class in conjunction with PYP units, create a HS (be the change program that uses this.
- Integrate the systems thinking approach, to all Makers challenges and Design Thinking model to ensure we find more than band-aid solutions to problems

Recommendations for the infrastructure

Currently, stakeholders are working in isolated pockets trying to find ways to create a culture of environmental awareness and practices for sustainability. It would be more efficient if these stakeholders work together, using a common approach that is simple to all, that allows not only for common language but a common thinking process, and that could also be integrated into the curriculum. Therefore, it is recommended to:

- ~~Take the~~ Undertake for a school team to discuss and complete the Compass Education school sustainability self-assessment tool to identify what systems needs to be improved and worked on.

- Create a sustainability group that
    - brings together ideas and intentions to avoid isolated pockets
    - creates workforces based on common goals and visions
    - provides information or help to groups who would like to make a sustainable project.
    - creates recommendations on sustainability for the leadership team
    - uses systems thinking to solve problems
    - coaches teacher to use systems thinking tools through activities

This is an exciting time for schools and students. It is a time of opportunity for students to challenge the status quo of the current ways of thinking and innovate systems. For schools, it is integrating system thinking tools in our teaching practices that create opportunities for collaborative critical thinking to identify problems and the leverage points that will make positive changes. Our ASB profile of a graduate, “She courageously takes risks and pursuers her interest and passions. She is a critical thinker who approaches challenges with optimism and persists in solving problems. She approaches life with imagination and creativity, knowing her opportunities are limitless.” Will be fulfilled to its full potential

AtKisson, Alan 1999. “Believing cassandra: how to be an optimist in a pessimist’s world”

Elena Blackmore & Tim Holmes (Eds); Elena Blackmore, Ralph Underhill, Jamie McQuilkin and Rosie Leach (Authors), 2013. Common Cause for Nature: values and frames in conservation. http://valuesandframes.org/initiative/nature/

COMPASS Education – School Sustainability Compass Self-Assessment pg. 2

"Nurturing Children's Biophilia: Developmentally Appropriate Environmental Education for Young Children." Nurturing Children's Biophilia: Developmentally Appropriate Environmental Education for Young Children. Web. 10 May 2015.

Monbiot, G. 2014, ‘An Ounce of Hope is Worth a Ton of Despair’

The Impact of the Systems Thinking in Schools Project: 20 years of Research, Development and Dissemination. (2015). Retrieved April 10, 2015.

Steve Vanderheiden. "Rethinking Environmentalism: Beyond Doom and Gloom." Global Environmental Politics 11.1 (2011): 108-113. *Project MUSE*. Web. 10 May. 2015. <https://muse.jhu.edu/>.

http://watersfoundation.org/