

What is Education For?

Interviews of Vermont Youth About School Change:

Communications Implications

Prepared by Catharine Biddle, Pennsylvania State University

Jane Feinberg, Full Frame Communications, and

Helen Beattie, UP for Learning

for the Vermont-based Course, “Communicating School Redesign Through a Youth-Adult Partnership Lens”

INTRODUCTION

Within the last few years, a robust body of research has been produced about how adult Americans think about education and learning. Commissioned by the New England-based Nellie Mae Education Foundation and conducted by FrameWorks Institute of Washington DC, this research brought into sharp focus the mental/cultural models that Americans bring to the topic of public education in this country. The underlying premise of the research is that investigating people’s deeper patterns of thinking is fundamental to knowing how to communicate effectively about social change—in this case, the redesign of the American educational system. The research informants were voting-age adults who represented a wide cross-section of the American public—taking into account geography, gender, race and ethnicity, political affiliation, and socioeconomic status. A set of findings emerged from the research, which are informing education reform experts and advocates all across the country. (link or footnote here to FW webpage on education.) Specifically, FrameWorks investigated the following overarching questions about K-12 education:

- How does the public think about American education?
- What is the public appetite for reform of the education system?
- What is the current public discourse on both education and education reform and how does it influence current choices?
- How can education and reform be reframed to evoke a different way of thinking, one that illuminates the need for more public responsibility and for alternative policy choices?

In the fall of 2014, two organizations partnered to bring the FrameWorks Institute research and findings to progressive education advocates in Vermont through a yearlong course titled, “Communicating School Redesign Through a Youth-Adult Partnership Lens.” The course was particularly timely, as the Vermont state legislature had recently passed Act 77, legislation that embraced a host of innovative educational policies and practices. Over the course of five weekend-long retreats, teams of students and educators from four high schools in Vermont gathered to learn about the research and to apply its findings to their school change efforts. The educators earned graduate school credit for their participation and high school students earned community college credit through dual enrollment programs at their schools.

Course content relating to communications was developed by Full Frame Communications, a Boston-based consulting practice. Founder and Principal Jane Feinberg spent five years on staff at FrameWorks Institute; she was instrumental in brokering the relationship between the Institute and the Nellie Mae Education Foundation and in creating interpretative products and tools for FrameWorks’ research on education.

The co-creator of the course, UP for Learning, is a Vermont-based non-profit whose mission focuses on helping schools implement youth-adult partnerships to increase student engagement and improve school climate. Executive Director Helen Beattie warns of the tendency across the country to ignore youth perspectives in educational change, assumedly based on a belief that adults will make good decisions on their behalf and that the students will then benefit as recipients of this wisdom. Part of her work involves shifting attitudes such that students—the key stakeholders in the school change process—become part and parcel of the move toward student-centered learning practices, instead of being cast as passive recipients.

The absence of current communications research focusing on youth perspectives of education and learning served as the impetus to replicate the Frameworks research with youth subjects. Although the scope of this research is admittedly modest in nature in comparison to Frameworks’ national research, it highlights the importance of mobilizing young people to be integral to the process of school change. It will inform Vermont’s Act 77 communications strategy, which will be developed from a better understanding of both youth and adult perspectives. Beattie notes, “It was time to address the glaring omission of research regarding the largest stakeholder group within education. We need to better understand how students feel and think about school redesign, engaging them as both researchers and ultimate change agents.”

Along these lines, Beattie and Feinberg commissioned doctoral candidate Catharine Biddle of Pennsylvania State University to work with the “Communicating School Redesign” teams to design a modest investigation of young people’s mental/cultural models about education and learning, as a discrete, but connected, element of the course. The purpose of

this research is two-fold: to understand youth attitudes regarding education, learning and Act 77 Personalized Learning Plan implementation, and where possible, to compare young people's mental models with those of the adult population. The goal is to gain a better understanding of youth mental models of education, so that adult and youth advocates and practitioners can better communicate school change to youth audiences.

This report investigates the following research questions, based on the data provided by face-to-face interviews and one focus group: a) What are high school youths' perceptions about the purpose of education, teaching and learning? b) How do these perceptions vary according to student characteristics and personal experiences? c) To what extent do youth's mental models approximate or diverge from those of adult informants.

To address these questions, the findings are summarized from 29 structured interviews and one focus group conducted by youth-adult teams across four schools in northern Vermont. The analysis is based on the class participants' initial synthesis followed by an in-depth, professional qualitative analysis. This overview explores themes that emerged from the data around youth's perceptions about the benefits of education for the individual and society, the content of an effective education, mental models of learning, student engagement, and the four R's (rigor, relevance, relationships and shared responsibility). Key elements of youth's mental models of education, learning and engagement are identified and discussed.

In conclusion, we describe how the mental models elicited by the interviews and focus group match or diverge from FrameWorks' research on adult informants that stimulated this study and offer communications "remedies" to inform future communications efforts. This includes a visual representation of a logic model that represents the current story that youth are carrying. This comparison can help us determine how to close the gap between a tested story that has been demonstrated to build adult public understanding and support for progressive educational change agendas and the current youth-generated story that plays into common—and unproductive—understandings about education and learning that emphasize individualistic, as opposed to collective, perspectives.

Research across a host of issue areas tells us that Americans typically default to individualistic ideas about who is responsible for social problems and thus who is responsible for solving them. When thinking in individualistic mode, Americans struggle to see the social and systemic aspects of an issue, which makes it virtually impossible for them to see that public solutions—policies and programs—are necessary. The goal, therefore, is to "reframe" an issue to elevate the collective purposes of education across a wide swath of the American public.

METHODS

The methods employed in this investigation represent a hybrid of two research approaches:

1) Cultural models research, grounded in the academic disciplines of anthropology, linguistics, and psychology. As Holland and Quinn define it (1987), “Cultural models are presupposed, taken-for-granted models of the world that are widely shared by the members of a society and that play an enormous role in their understanding of that world and their behavior in it.” Cultural models interviews look not so much as *what* people say about an issue, but rather, *how* they talk about it, that is, what immediately comes to mind.

2) Action research, initiated to solve an immediate problem or a reflective process of problem solving led by individuals working with others in teams or as part of a "community of practice" to improve the way they address issues and solve problems. Denscombe (2010, p. 6) writes that an action research strategy's purpose is to solve a particular problem and to produce guidelines for best practice. As designers and stakeholders, researchers work with others to propose a new course of action to help their community improve its work practices.

Participants in the “Communicating School Redesign” course collaborated in the design and implementation of the investigation. Together, educators and youth conducted interviews with students in their respective schools in northern Vermont: Hazen Union High School in Hardwick, the Big Picture Program (a learning community contained within South Burlington High School), Peoples Academy in Morrisville, and Harwood Union High School in Moretown. Study participants were sampled from the course participants’ schools in keeping with the imperative of action research to produce actionable, contextually relevant results. The schools themselves vary in their characteristics, as can be seen in Table 1. While these four schools do not represent the full diversity of Vermont schools, they do demonstrate diversity with regard to size, location, and socioeconomic status.

Table 1. *Participating Schools’ Demographic Characteristics*

	So. Burlington	P. Academy	Hazen Union	Harwood Union
Locale code*	City, small	Rural, distant	Rural, remote	Rural, distant
# Students enrolled**	887	271	248	737
% Low income students**	17.14	50.44	63.25	27.95
% Non-white students**	17	7	5	3
Graduation rate (%)***	98.5	95.6	98	98.5

*Source: National Center for Educational Statistics Common Core Data

**Source: Vermont Agency of Education School Data Report 2012-2103

***Source: Vermont Agency of Education Drop-Out and High School Completion Report 2011-2012

Participants were selected for interviews and the single focus group using a purposeful sampling technique. Four youth-adult interview teams identified ten potential participants at their four respective schools. Attention was paid to selecting students whose experiences with school might differ, particularly by their experience in mainstream or alternative tracks at their school. The teams attempted to make sure that the students selected from these pathways represented an equal number of male and female students, and diversity with regard to grade-level.

Youth and adult interviewers made use of a structured interview protocol, selecting between 10 and 20 questions from a pre-set list and then eliciting greater detail from participants with follow-up questions. Twenty-nine interviews and one focus group from four schools were included in this analysis – ten from Hazen Union, ten from People’s Academy, six from South Burlington High School (including students in the Big Picture Program) and three from Harwood Union, along with one focus group at this school with six participants. Both youth and adult researchers conducted interviews and often they were co-facilitated. These interviews, along with the focus group, were then transcribed by both youth and adult transcribers.

To analyze the transcribed interview and focus group data, a constant-comparative method of coding was utilized with the assistance of Nvivo, a qualitative data analysis software program. The coding scheme was loosely organized by the concepts of Education Mental Model and Learning Mental Model. Transcripts were reviewed and ideas relevant to these concepts were identified during this first review. For example, in the Education Mental Model category, relevant ideas discussed by youth included the type of skills that students most often associated with their beliefs about the future (e.g. basic, soft, critical thinking), and ways that students thought about the future (the need to get a job, the need to go to college, the need to be prepared for “real” life). In a second round of review, I attempted to group these ideas into themes such as individual benefit vs. collective benefit (i.e. to whom students saw the benefits of their education accruing), skill development, the idea of “getting knowledge” (connoting knowledge as something which one can store and accumulate) and beliefs about the future. Once grouped, the individual comments grouped under these themed headings were reviewed once again to better understand the breadth of related ideas and perceptions around these topics. Where appropriate, new sub-codes were created to track this diversity.

A similar process was used for identifying concepts related to youth’s learning mental models, resulting in the identification of major themes such as “learning as accumulation”, “learning as developmental”, “perceptions about learning styles” and “growth mindset vs. fixed ability”, among others. Lastly, because this study was conducted by a group of youth and adults who were already familiar with a student engagement framework known as “the 4 Rs”, this analysis specifically considered youth mental models from the vantage points of Relevance,

Rigor, Relationships, and shared Responsibility. Special attention was paid in the analysis to the ways in which youth did or did not perceive these factors to be related to engagement in learning.

In addition to these, other themes were raised by students, including their reflections about particular school policies such as tracking, the inclusion of youth voices within schools, their school facility, and the distribution of resources and attention across the student body. Where these reflections are relevant to understanding youth mental models of teaching and learning, they are included in the discussion of the findings. The synthesis begins first with youth's mental models of education, and then delves into youth's mental models of learning, learning styles, and engagement in learning.

FINDINGS

Education Mental Models

One aim of this study was to understand how youth think about education and its purpose within society. To this end, interviewers asked youth questions about the point of school, the skills young people need for the future, and their perceptions about their own schools (both what the school does well and what could be improved). Although answers varied widely, a few themes emerged consistently.

The purpose of education

The majority of the participants, when asked to identify the "point of school" by the interviewers, indicated that, from their perspective, the benefit of education accrues to the individual. As one student said,

I think the point of school is to learn things that might help you in the future and to learn what you want to do when you're on your own.

Students indicated that education was to help you "have a better life", to "be more successful", "further your knowledge", "learn", and "achieve [your] goals". Many students spoke specifically about the ways that school could help you "prepare yourself for a future job", "to get you ready for real life", or "to prepare you for college". These three specific pathways were the most frequently cited goals that youth felt they ought to be preparing themselves for through their education. School was seen as the place where youth practice making choices that will help inform the way they live their lives. As one student said,

You get to decide your future in school, like how hard you work and what classes you take, to a certain extent, which kind of is how life is. You get to decide how hard you want to work at stuff and what you want to do with yourself.

To this student, and to many of the other participants, the main benefit of school is the way in which it allows individuals to develop their talents (or human capital) which then allows them to use those talents to secure better lives for themselves in the future –with “better” implied to be higher post-secondary educational attainment, more success in their career, and more self-fulfillment in the form of better handling unknown future challenges.

One student indicated that she believed that the conversation about the purpose of school has changed over time. In her words,

Traditionally when public schools were first started, the point was to get more educated voters. That was the initial point of school. Now it’s definitely to get better prepared for your future, I think. Like, you go to elementary school. You go to middle level. You go to high school. You have high school so you can go to college. You go to college to get a job. It’s the basic thing that everyone says now.

Only one other student pointed to a potential collective or societal imperative for education, saying that the point of school is to “widen your mind”, and locating the impact of that individual change on society as a whole. In her words,

It’s to help you get smarter... If we didn’t have school, our country wouldn’t be anywhere. It’s the foundation for everything, pretty much.

So, while this student sees the benefit of school accruing to the individual, she perceives the impact of that individual benefit to each citizen as being beneficial for the country as a whole. This perspective, however, was not expressed by the majority of participating students.

What should education consist of?

When prompted to identify the skills that today’s young people need, many saw the acquisition of both soft skills and basic skills as the most important benefits of school for youth. Students cited four categories of soft skills that they felt it was important for young people to learn: a) personal responsibility (also referred to as self-motivation, having a “good work ethic”, self-control and the ability to do “independent work”); b) effective teamwork and communication (including being respectful of others who are different), c) being organized and managing one’s time well; and lastly, d) specific types of literacies that youth felt that they would need to “survive in the real world”. These included both financial literacy, like understanding how to manage finances and pay taxes, as well as technological literacy. The

overwhelming majority of students interviewed mentioned some combination of these skills as being important for young people.

Students also referred to a variety of reasons why specific subject knowledge might be important. Participants tended to point to the necessity of the “basic building blocks” of being able to write, to know grammar, to read and to do math. As one student expressed,

I think you still do need a base knowledge of certain things like a little addition, subtraction, multiplication, division. You need to also know a certain level of things by high school, like, I’m kind of hoping you’d know – like, everyone should have a general knowledge base.

While no student explicitly mentioned critical thinking skills, the connection between basic skills and applying knowledge in other contexts was mentioned. As one student said,

I think that it’s important for like general skills and everything, so that like, if you’re ever given a situation you don’t know –like, what kind of situation you’re gonna get into that you need information for.

Another student took this connection a step further and described a link between basic skills and problem-solving:

Obviously it’s important to have like reading, writing and basic skills for like different subjects, but most of the stuff, like math, like you’re not going to use the majority of that, but...it’s teaching you how to think and how to solve problems.

These connections point to a potential link within these youth’s mental models around what they see as “basic skills” and the development of critical thinking skills.

Learning Mental Models:

Young people’s perceptions of learning seemed to fall into a few discrete, but not necessarily mutually exclusive categories. These include beliefs about what learning actually consists of (skills or content, for example), perceptions about learning as a process, perceptions about the 4Rs (rigor, relationships, relevance and shared responsibility), and the relationship between those Rs and student engagement.

Many participants saw learning as a store that accumulates over time, like marbles put one by one into a jar. Students saw two types of learning that one could “get” in school: a) the accumulation of new skills and b) the accumulation of discrete pieces of information, or content. This belief was demonstrated in students’ descriptions of how learning might be

measured. Many students pointed to pre and post-tests as a way of gauging the accumulation of student knowledge. As one student described,

I think in order to measure what a kid's learning, you need to know what they knew in the beginning of the year, and then how much they did learn throughout the year.

The concept of "improvement" over time was central to this understanding. Students said that they felt that opportunities to demonstrate improvement in their current school experience depended largely on the preferences of their individual teachers. Additionally, students also indicated that learning was very "individual", that students have different "strengths and weaknesses" and thus learn differently. As a result, some students indicated that young people ought not to have their learning be measured against each other, but rather against themselves.

There was some sense that young people saw the accumulation of learning as related to processes of youth development; for example, that certain material was more appropriate at certain times in young people's development as learners and people. Some students made the distinction between what was important to learn at different ages in one's school career. For example, a student who talked about the importance of mastering basic skills also remarked that,

By high school, like, I'm kind of hoping you'd know -- like everyone should have a general knowledge base. And [then] by high school you can start figuring out your passions.

This conception of the necessity of tailoring the learning that is accumulated to young people's development is discussed in more depth in the section on shared responsibility, where the relationship between youth development and responsibility for decisions about learning is more fully explored.

Learning styles:

Many young people's mental models of learning styles seemed to include familiarity with the Barb and Swassing's (1979) model of learning modalities (visual, auditory, kinesthetic). Many students self-consciously referred to themselves as "hands-on" learners or "visual" learners. However, other students drew on much broader language to describe the way that they learned, including just "note-taking" or "reading the book" to themselves, needing to be given an example by someone else, or simply through repetition of a skill or concept. Interestingly, when asked how they felt their learning style compared to those of their peers, half of the students interviewed indicated that they felt that their peers likely learned the same way that they did while the other half indicated that their peers likely learned in a way that was different from theirs, indicating no systematic differences between students with regard to

these perceptions.

The 4Rs and Student Engagement

The concept of student engagement was an interesting and complicated one, rife with contradiction. While many of the participants expressed that rigor, relevance, relationships and responsibility all play a role in creating and sustaining engagement in learning, their perceptions about *what* those terms meant and the *balance* between them differed widely.

Shared Responsibility

For the majority of students interviewed, personal responsibility was the single most important factor affecting student engagement. The necessity of personal responsibility permeated student responses on almost every other concept related to learning, including rigor, relevance and relationships. Youth tended to assign the lion's share of responsibility to the individual for staying engaged. A common description of what one needs to do well in school was to "just being willing to do your homework and pay attention in class". The ability to work "independently" and develop a "good work ethic" were also seen as key things that students ought to be demonstrating in school; however, youth did not necessarily believe that the school was responsible for cultivating these attitudes – rather students ought to "care more" and "work hard".

Additionally, some youth tended to differentiate between themselves and their peers ("others") when discussing motivation and responsibility for learning. For example, one student captured the spirit of many of these comments by saying,

Usually I can focus pretty well in my classes, so usually I am engaged all the time. I'm not sure about other students. Sometimes during class, they tune out.

Other students expressed similar opinions, saying that, "a lot of people just do the minimum and try to just get by on that or don't even do that," or "If you're in a class and there's like people who don't care, you just feel like "aren't you caring?" Through comparing their own behavior or attitudes to those that they perceive in their peers, these students demonstrate a belief that taking responsibility for one's learning is an individual choice and does not depend on the context in which that choice is being made.

This belief about the lack of intrinsic motivation of other students led many young people to reflect that students as a whole group may not be ready for the responsibility of making decisions about their learning, and might interfere with important life lessons about managing time and planning. However, students seemed dubious even with regard to smaller opportunities to take responsibility for their learning. For example, when asked if students

should have the opportunity to revise their work, many students expressed thoughts similar to this student:

Most of the teachers in the ninth grade give you some chance to make it up for some sort of a point. If you could do that with everything, and just keep trying over and over again then I don't think it would work too well, because you would write a paper knowing that, well, if I fail then I can just start over again.

The possibility of failure was seen as a powerful way to create motivation. However, it is possible that grade-level plays a role in shaping students perceptions of these issues. For example, some students indicated that they thought this might be a developmental issue. As one student said, "I think it depends on how old they are. I think you should have a big say, as you get older." Other students from more senior grades indicated that the opportunity to revise their work ensured that they had an opportunity to more fully engage with and learn concepts. As one student said, "whether it's the first time, the second time, or the eighth time you do it, it's when you get it that's important, so that's a very big thing."

Adults *were* assigned a degree of responsibility for shaping student engagement. Two students mentioned the role of one's home life in education; however, this was mentioned in the context of being a potential obstruction to student learning, rather than a potential aid. Teachers were more likely to be assigned some responsibility for engagement, particularly by students participating in alternative programs. A few students pointed to "how [teachers] treat their students" as an important part of this responsibility. One student participating in an alternative program expressed the importance of this by saying,

I think one of the biggest things is teachers actually paying attention to their students and kind of spending time to get to know each of their students. Like, I know they have a lot of them but understanding their different learning techniques and how certain students do or don't pick things up. I think a lot of kids go through school unnoticed and teachers think they are just getting it but they're not.

Additionally, one student in a technical track mentioned that the "way [a teacher] teaches" is an important factor for engagement; for example,

I know that when I was in history last year with my teacher, that all the kids were always doing their work, always trying to finish it, and we loved going to class because he was always treating you like you were on the same levels. Whereas in some classes you walk in and they just treat you like you're a little kid from the beginning and you don't want to listen to them you don't care about you, and you just want to rebel.

However, some students went so far as to say that it was not developmentally appropriate for teachers to play a large role in getting students to be more responsible at the high school level. One student expressed the opinion that teachers might need to play that role with middle schoolers, but with high schoolers they ought to “gradually make it less and less”.

Rigor

The greatest consensus amongst the interview participants was found around the concept of rigor. One student described rigor (challenge) as “the whole basis, one of the huge parts of learning”. Students characterized being challenged as being put in situations that you found difficult, but not unachievable. One student explained this distinction in the following way:

It’s very important because if you’re not challenged you’re not learning anything and nothing good is coming out of it. If you’re not challenged it basically means you already know everything and you’re just, like, why are you even in school. But if you’re overly challenged, it just stresses you out. It’s just, like, “I can’t do this. Why am I even bothering?” So I think it’s super important to have that happy medium.

How this happy medium is achieved was a slightly more elusive concept. Students elaborated at length on the dangers of living in the extremes – having too much challenge or too little challenge. Too much challenge creates feelings of frustration and stress, both the product of a fear of failing. Failing was defined as not being able to perform the assigned task and sometimes subsequently receiving a failing grade. On the other hand, too little challenge was described as “boring”, resulting in a lack of engagement and the production of “mediocre work”. However, the formula for achieving the right balance was left unspecified.

Relationships

When asked why relationships were important, students pointed to two related ways that teacher relationships affect their experience in school: personal care and extra help. Students agreed that the amount that a teacher communicated that they care about the students was an important part of engaging students within the class. As one student put it, “if the teacher doesn’t care about teaching us, then why should the students care about learning?” Others pointed to the negative effects of having a teacher who was perceived “not to like you”, saying that this feeling led them to avoid asking that teacher for extra help. As one student said,

Without a good relationship with your teacher, you won't want to come in, you will hate the class, and you won't retain information.

Extra help was pointed to as one of the primary benefits of having a good relationship with a teacher. Students described numerous ways that teachers had shown that they cared through the provision of extra help, by taking time after school to help complete a research paper, having an open door policy, or supporting school policies that students favored.

Every student agreed that positive relationships with teachers were important, though there was some difference of opinion as to their degree of importance. Interestingly, most students felt that their perception of whether or not a teacher liked them as a person played a role in their engagement in a class, although a few students felt that their peers did not share this perception or did not believe this to be an important part of their engagement in learning. As one student said,

I'd say it matters, but not as much as some people say. Most teachers won't give someone a bad grade just because they don't like them. You can just go into class, listen to the teacher, do the work, hand it in, and not really have a relationship with the teacher and still do okay. But it helps when you do like the teacher and you know that they like you, because you are more apt to go in and get help and stuff like that, and if the teacher makes it fun to learn it then it's more likely to stick with you.

Relevance

Participants defined relevance in two primary ways. Some students saw relevance as the individual connection between the student and the content or skill being taught. As one student put it, schools should "make it so more kids are doing what they want to be doing instead of what they have to be doing". Relevance, to this student and to a number of other participants, is the product of a connection between a student's interest and the skills or content being taught in a class. In this perception, pedagogy, or the way in which content is taught, is not perceived to play a large role in creating relevance. As another student described,

I know now that when I grow up I want to go into pharmacy, and because of that chemistry, math and stuff like that is pretty relevant to me, and because of it I get more out of it. Whereas whenever I took social studies classes and was learning about maps I knew that I didn't want to do anything to do with maps other than getting from point A to point B, so like memorizing the names of states I could never do just because it was never really relevant to me. It's really important to be relevant so that people are interested in it, and not be like "Oh, I have to learn this", it will be "Oh, I want to learn this".

As is reflected in this student's observations regarding math, chemistry and the connection to this particular student's future plans to study pharmacy, the role of individual

imagination is an important one within this perception of relevance and its relationship to engagement. In order to perceive something as relevant (and therefore, engaging), self-knowledge and a coherent imagining of one's future is an important part of identifying whether or not something is relevant. A few students pointed out that this might be more effectively achieved in the later grades as students get closer to graduation. As one student proposed,

I feel like kids would be able to pick the classes that they know are going to help them succeed. Or maybe you have the required classes in middle school but once you get into your junior year or something you really get to pick what classes you know are going to help you later on.

This student's remarks indicate that she believes either that students are better able to imagine their futures as they get older and closer to graduation and therefore will be able to make more informed choices about what is personally relevant.

Students coming from this perspective regarding personal relevance were more likely to identify a tension between the need for students to pursue classes that were personally interesting and the need for students to take classes that would provide them with a solid foundation across academic subjects. One student described this tension in the following way:

Relevance is hard in high school, because it's such a basic intro to all the subjects. Like, you're not gonna to be – like, you're gonna have to have classes that you're not going to care about or never going to use, but you almost have to have them, like because-- because like it's like an intro to everything, but then you go to college and you're more into what you're going to study and stuff. So, it's hard to have relevance...nothing can be relevant to everyone, especially in high school.

A second way of understanding relevance was simply seeing the connection between what is being learned (be that skills or content) and an application for that knowledge in the real world. Students who perceived relevance in this way tended to see it less as a matter of personal interest and more as a function of learning being clearly related to contexts and situations outside of school. One student described it as,

If you're going to make [learning] relevant then they have to be problems that students are seeing today and how we can understand those better.

Many students described knowing that they had learned something if they could identify a context outside of school in which they would use that information, such as seeing something they learned in social studies reflected in the news or hearing a vocabulary word they had

learned in English in a conversation or on the radio. While still individually oriented, these perceptions of relevance related much more to direct applicability rather than the future orientation of students.

Youth saw hands-on learning as one instructional method to enhance the connections made between the skills and content they learned at school and the “real world”. One student participating in a technical program described the way in which traditional instruction and project-based approaches together enhanced his ability to learn:

We did stuff like building a house, but we also did stuff in the classroom like math and such that was all related to construction. It made it better to understand everything when you understood the topic.

Many youth saw project-based learning as inherently more interesting as it got them to be “active”, an aspect of learning that many youth identified as a key part of engagement.

CONCLUSION

The combined data from the interviews with youth painted a picture of mental models of education, teaching, and learning that were both aligned with and divergent from the model developed by the Communicating School Redesign course that grew out of the FrameWorks research. First, the value statement informing the course model makes clear the intent to communicate that education is a collective good, an important part of building an educated society. The mental model described by many youth focused on the benefits that education confers to the individual. This gap between the informing value statement of the course’s model and the mental model of youth suggests that work will need to be done to shift the thinking of youth towards a more collectivist or community driven understanding of the purpose of education.

Secondly, many – though not all – youth perceive learning as accumulation of knowledge. While this mental model does not fully align with the “open head, pour in knowledge” model of learning that the course eschews, these perceptions are not aligned with the idea of skill building as the driving force behind learning. Rather, this mental model of learning has a more “collect them all” feel with regard to the development of new skills and the acquisition of new content knowledge.

Thirdly, student engagement, a complicated concept that involves a balance of the 4Rs, is seen as primarily driven by the intrinsic motivation of the individual who makes choices that lead him or her to be engaged. This decision is supported by being placed in challenging situations, having the support and respect of one’s teachers, and both courses and course content that speak to the personal interests of a student. Given, however, the lack of personal

responsibility that many students perceive in their peers, the interviewees were unsure of the level of decision-making that students could be asked to be responsible for as a part of their education. This uncertainty was then often expressed as reservations about the introduction of Act 77, specifically, the creation of Personal Learning Plans for each student in Vermont, that would increase youth's agency in decision-making about their education. The core concept of "adults as guides" that is built into the structure of the PLP process was not a role that was expressed by any participant at any point in their interviews. Therefore, shifting youth's perceptions about the positioning of teachers and the nature of shared responsibility will likely need to be an important part of a communications strategy for social change.

Implications and Remedies of the Findings

The purpose of this research, as previously stated, is to understand youth perspectives on education and learning, and to see how youth perspectives align with those of American voters. Below is a short explanation of how each finding does or does not align with what was discerned from the original research investigation with adults, and the implications of the finding. It also offers a proposed remedy for avoiding the traps inherent in the finding.

Finding 1: The majority of the participants, when asked to identify the "point of school" by the interviewers, indicated that, from their perspective, the benefit of education accrues to the individual.

Alignment: This finding closely parallels the FrameWorks research, which also uncovered an emphasis on individual achievement among adult informants. It's not terribly surprising that this is the case: the public conversation about education is highly focused on individualistic and career-focused values. What's most troubling, however, is that only one student in this investigation pointed to a public purpose for education.

Implications: When youth view school as solely an individual enterprise, they miss the big picture about why education is important for their community, and for the society as a whole. This immediately establishes a competitive frame, whereby one student is competing with the next for "success"—however that is defined, rather than creating a community of learners who can build a bright future together. This finding also puts jobs in the foreground, without attention to citizenship and community participation.

Remedy: Clearly, we must broaden students' horizons and introduce them to the idea of education as a public good. Because the individualistic frame has dominated the public space for the last four decades, most young people have had minimal exposure to the importance of

our shared fates as citizens. FrameWorks' prescription, to articulate a Value Statement that emphasizes the collective nature of education, might help young people recognize that 1) they are not solely responsible for whether they get a solid education, but rather, part of a system and 2) that the quality of life of their town depends on every student succeeding in school. Obviously, further testing would need to be conducted to fully verify the salience of this proposed remedy.

Finding 2: When prompted to identify the skills that today's young people need, many saw the acquisition of both soft skills and basic skills as the most important benefits of school for youth.

Alignment: This finding is somewhat different from the findings in the original FrameWorks research. Many adults, when asked about education reform, talked about going back to "the 3Rs," also known as "the basics": reading, writing and arithmetic. Because the 3Rs have played such a central role in the last 100 years of American educational policy, it is understandable that some adults would yearn nostalgically for simpler modes of learning, not taking into account the fact that the world has changed so dramatically. In addition, the research revealed that adults view school as the location for the accumulation (and regurgitation, as it were) of content, while extra curricular and community-based activities were understood as the primary location for skill development.

Implications: The good news is that young people seem to recognize the importance of other kinds of skills as essential to their success in and beyond school. In addition, instead of separating skills and content into separate spheres, they seemed to understand that all kinds of learning can happen in all kinds of settings.

Remedy: Education reformers might seek help from students as agents of change because they more readily understand that a quality education consists of acquiring a wide array of skills and knowledge. They can also be effective translators for how the 21st century classroom itself is a much wider learning space than in previous generations.

Finding 3: Even though students understood the importance of skill development, they nevertheless held the misconception of learning as an accrual of content, versus a dynamic process of inquiry and higher order problem solving and abstract reasoning.

Alignment: Adults, by and large, hold a “banking” model of learning, whereby content is poured into an empty vessel, and the confirmation of learning is the outpouring of that content back to the teacher. While young people share that model to some degree, there seems to be a growing recognition among youth that learning is a complex process, that people learn differently, and that learning is developmental in nature.

Implications: There is still a lot of work to do before people—youth and adults—fully grasp how learning happens and that it is a multi-developmental process. Young people may be especially receptive to learning about their own brains and the developmental process. In fact, research has demonstrated that self-knowledge of this nature improves educational outcomes. Giving youth the opportunity to learn, and then teach, about the learning process to their peers and to the community at large could be a salient reform strategy.

Remedy: Given the finding of youth responsiveness to the story of learning, it would be tempting to load them with facts and figures and send them out into the community. Research tells us, however, that facts need a frame. More than that, people need metaphors to gain understanding of complex topics—picture stories that enable them to quickly understand a concept or mechanism to which they can then attach facts. FrameWorks developed a series of metaphors that relate to skills and learning. We suspect that these metaphors hold promise for youth understanding in ways that are similar to how they’ve aided adult understanding.

Finding 4: Responses suggest that students perceive their role largely as passive recipients of their education and learning. Taking responsibility is often defined as “playing the game of school” as it currently exists (doing your homework, paying attention in class, working hard) versus assuming increasing roles of responsibility in learning and helping to shape the learning context.

Alignment: This finding is closely aligned with the adult research, in which students are seen as the targets of education and teachers are viewed as the delivery mechanism, based primarily on their sense of caring.

Implications: If students do not have a concept of sharing in the construction of learning or the shifts in roles that Act 77 and similar pieces of legislation require, it will be difficult to make the necessary changes in schools. Moreover, unframed communications about new policies will likely fall on deaf ears or make little sense to stakeholders, including young people.

Remedy:

As in the previous finding, it will be important for messages about educational redesign to be framed using a full complement of tested values and metaphors, though further testing will be

needed to affirm that these frame elements work as well with young people as they do with adults.

Finding 5: Students express serious doubt in their peers' capacity for intrinsic motivation, particularly in the earlier grades (through Grade 10). Students report that fear of failure and grades are the major motivational factors for learning at present. They hold low expectations for their peers in the absence of this external reward.

Alignment: Though the FrameWorks research did not address the issue of motivation directly, it was clear from the adult findings that testing and accountability are core cultural models and a central part of the public conversation about education reform. It's not surprising that these ideas would be transmitted to young people; in many ways, regardless of generation, we all drink from the same cultural well.

Implications: Clearly, the cultural shift necessary for moving people (adults and youth) from extrinsic toward more intrinsic ideas about motivation will be challenging.

Remedy: Well-framed communications can be helpful, especially if ideas such as brain plasticity (that our brains have the capacity to change and grow throughout the lifespan) are conveyed with well-tested metaphors. Moreover, "mindset" research by Dweck and others has been successful in helping people see that when young people are motivated and engaged, learning outcomes improve.

APPENDIX A:
YOUTH MENTAL MODELS OF EDUCATION AND LEARNING

PURPOSE OF EDUCATION:

IN ORDER FOR ME TO GROW AND PROSPER AS AN INDIVIDUAL, I NEED SCHOOL TO PREPARE ME FOR MY FUTURE CAREER, EDUCATION, AND LIFE



LEARNING IS:

An individual's accumulation of knowledge and skills. Learning can be measured through assessing a student's stockpile of knowledge at the beginning of the year, and the growth/accumulation of that stockpile at the end of year.



STUDENT ENGAGEMENT IS A RESULT OF:

PERSONAL RESPONSIBILITY (student effort and hard work, the individual choice to pay attention, and the choice to not fool around)

RELEVANCE (relates to future life or known experiences; engages students in a way that motivates them)

RIGOR (high expectations & challenging learning opportunities)

RELATIONSHIP (Teachers are excellent sources of extra help and support)



MY UNDERSTANDING OF ADDITIONAL WAYS I MIGHT BE ENGAGED IS:

PERSONALIZED LEARNING PLANS: These might be an interesting way of ensuring personal relevance, but I'm not sure that these would be successful because not every student is sufficiently responsible to take charge of their learning in this way.

Communications Course Survey Questions

SETTING THE STAGE

1. What year are you & what is your favorite subject?
2. What do you think you will want to do right after high school?
3. How would you describe yourself as a student?

EDUCATION MENTAL MODELS:

4. What is the point of school?
5. What do you need to be prepared for your future how does school contribute to that?
6. What is our school doing right?
7. How could school be improved?
8. If you could design your own ideal school day, what would it look like?
9. How should we measure student learning?

LEARNING MENTAL MODELS:

10. Describe your most memorable learning experience. Why was it so memorable?
11. When do you feel most engaged during your school day?
12. How do **you** learn?
13. How do you believe **most people** learn?
14. How do you know you learned something?
15. What things do you think most influence how well students do in school? Why?
16. What are the most important skills young people feel you need to learn?

MENTAL MODELS RELATING TO THE 4 Rs:

17. To what extent should students be involved in decisions about their learning?
18. *How important is it to have the right level of challenge when you learn? Please share an example?
19. There is a lot of talk about making learning “relevant”. How would you describe (define) relevant learning?
*If you think relevance matters in learning, why do you think so? In general, how relevant is your education at the moment
20. *To what extent does your relationship with a teacher matter?

QUESTIONS RELATED TO PARTNERSHIP & NEW STRATEGIES:

20. To what extent do your teachers give you an opportunity to revise your work?
 - what would it be like if this happened more?
 - if you revised your work in each class until you “got it”?

21. What if someone told you were going to have a teacher to partner with, to help you design a plan for your high school experience? This plan would be based on your interests and goals and might include a mix of things like regular classes, internships and distance learning. What are your thoughts and feelings about this possibility?