

The Communicating School Redesign (CSR) Mental Models Questionnaire: 2016-2017 and Aggregate Results

Prepared for



Unleashing the Power of Partnership for Learning

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Overview

In 2016-2017, schools engaged in the Communicating School Redesign course administered a survey in their high schools. Almost 1600 students, teachers, and community members completed the survey, providing valuable information about mental models of education, learning, and knowledge of Act 77. The survey is a useful diagnostic to guide the communications campaign associated with the partnership, along with generating baseline data for action research projects.

Highlights

In general, results from the 2016-2017 CSR are similar to the two previous years. In a number of ways, the mental models of education and learning held by educators, students, and other stakeholders align with the driving principles for Act 77.

- Educators and students alike espouse support for students taking an active role in their education and partnering with teachers to shape learning opportunities.
- Educators have a high understanding of current educational reform in Vermont; students and community members have less of an understanding.
- There is broad support for the core elements of Act 77 (personalization, flexible pathways, and proficiency-based evaluation) across stakeholder groups.
- Teachers, students, and other stakeholders recognize the importance for education to keep up with discoveries about teaching and learning, and the rapidly changing world.
- With a few notable exceptions (such as knowledge of Act 77), opinions and beliefs are shared across stakeholder groups.

Continued shifts in mental models for education and learning are necessary in order to fully deliver the promises of educational reform in Vermont. There are a number of areas for additional growth.

- Students in particular continue to view education as a private good, rather than as providing a collective or community benefit.
- A large number of stakeholders, and students in particular, view alternative pathways to graduation as potentially harmful to post-secondary options, and that such pathways are for students who have difficulties in traditional settings.
- Although teachers have begun to embrace intrinsic views of motivation, students continue to value extrinsic motivators, such as grades.
- In some instances, regressive rather than progressive school reform is valued.

Understanding of Act 77 and educational reform in Vermont remains quite different across different stakeholder groups.

- Teachers report the greatest understanding of Act 77 and educational reform, with 95% of responding teachers indicating “some” or “a lot” of knowledge about reform efforts.
- Students remain the least well informed of stakeholder groups about the efforts in Vermont to reform their education.
- Use of the term “Act 77” introduces uncertainty into how stakeholders report their knowledge of Vermont educational reform.

Similarities across the cohorts from different schools in different years indicates the importance of continued work by organizations that partner with schools and communities to help develop mental models aligned with Act 77 and flexible pathways. Understanding of constructs relate to educational shifts in Vermont does not appear to be shifting in the absence of direct efforts by school partners. Although the data do not exist to demonstrate growth in teachers, students, or other community stakeholders on these mental models in conjunction with engagement with UP For Learning, there is evidence that non-stimulated growth over time towards understanding in these mental models is not occurring.

Introduction

Since the enactment of Act 77 by the Vermont Legislature in 2013, the Flexible Pathways Initiative has largely driven educational reform in Vermont. Particularly with regard to teaching and learning, this policy has shaped classroom, school, and supervisory union practices. The Act codifies three intertwined values: personalization of education, proficiency-based evaluation, and flexible pathways to graduation. These elements intersect with mental models of education and learning held by diverse stakeholders. Levels of understanding within these models as they are aligned with Act 77, along with knowledge of Act 77 itself, can be used to describe stakeholder understanding of school redesign happening in Vermont, with greater understanding implying greater support for such reforms.

Over the past three years, UP For Learning has conducted the “Shaping Our Future Together” survey in participating “Communicating School Redesign” school communities. Students, teachers, community members, and school board members are invited to complete the survey. In the 2014-2015 school year, 581 respondents from 5 high schools and their communities participated. The 2015-2016 wave yielded data from 1807 participants from 7 high school communities. The most recent administration of the survey, from the 2016-2017 school year, generated responses from 1598 individuals at 4 different high school communities: Lyndon, Harwood, Twin Valley, and Woodstock.

This report provides the results from the 2016-2017 administration of the survey, along with comparisons between this wave of data collection and prior waves of the survey. In each year, the survey has been given in different communities, limiting the interpretation of longitudinal results. However, given the distribution of these school communities across the state, the results can provide perspective on shifting (and static) attitudes and understandings in Vermont.

Methods

The administration of the survey in 2016-2017 was similar to the prior two years. Youth-adult research teams identified stakeholders at their school and sent the survey online using Google forms. The survey was distributed at Lyndon, Harwood, Twin Valley, and Woodstock. Data was collected and combined across the school sites. Summary statistics were generated based on stakeholder groups and the combined 2016-2017 sample. The full raw data, gathered by school, and the summarized data are available in the Microsoft Excel file titled “CSR Composite Data 2016_2017.xlsx”. The summarized data, along with results from previous years and aggregated data across those years, is available in the Microsoft Excel file titled “2014-2017 CSR Survey Comparison.xlsx”.

The survey consists of 1 demographic question and 20 content questions. The demographic question asks participants to identify their stakeholder group. The breakdown of participants by stakeholder group is presented in Table 1. A majority of the sample consisted of students, and in particular high school students. It should be noted that Lyndon yielded very few ($N = 3$) middle school responses, and the Harwood sample contained no community members or school board members. For analysis, the sample was collapsed in two ways. First, following direction and following prior analyses, the school samples were not analyzed separately. Second, middle school and high school groups were combined for analysis. Again, this follows the approach taken in prior years.

Table 1: 2016-2017 Participants

Stakeholder Group	Total N	% N
Community Member	136	8.51%
Educator	187	11.70%
High School Student	951	59.51%
Middle School Student	304	19.02%
School Board Member	20	1.25%
Total	1598	100.00%

The 20 content questions were developed over the past two years and are aligned with previous research conducted by Up For Learning and the Frameworks Institute. In general, the questions can be mapped on to criteria from mental models of education, learning, and knowledge of Act 77. For a further explanation of the development of the survey tool, see the report on the 2014-2015 CSR data authored by Dr. Catharine Biddle.

In general, the questions consist of statements and participants respond by selecting their level of agreement on a 6-point Likert scale. This design eliminates the possibility of neutral responses. The three questions related to familiarity with Act 77 provide 3 answer options, where respondents rate their familiarity. Other deviations to the general design include one question that asks participants to rank 3 items, and one question about neuroplasticity, that provides 3 answer options. For this analysis, the 6-point Likert scale was generally collapsed into two broad categories of “agree” and “disagree,” to aid in interpretability. In some instances the percentages of a group of the sample responding in the extreme are noted.

Along with summary statistics, the questions were mapped back to the criteria from the provided framework. The responses were then characterized as pre-awareness, awareness, or understanding, based on the narrative from the framework. Additionally, following the 2015-2016 report, questions were gathered into larger categories of beliefs.

Results

The results section is separated into categories containing items related to beliefs about teaching and learning, beliefs about intelligence and motivation, understanding of Act 77, beliefs about the pillars of Act 77, beliefs about the purpose of education, and the identified need for change. Narratives are provided at the item level, and questions are sorted by whether the mental models are at or near the understanding level, or if they are not yet developed to this stage. Finally, each narrative is accompanied by the aligned criteria from the mental models framework used to help develop and interpret the survey.

When individual stakeholder groups are not noted, the description of the responses can be understood as describing the sample in general. When disagreement across groups is substantial, this is noted. Statistics for individual groups are provided as well when such findings may augment an argument.

Mental Models consistent with Act 77 and demonstrating an understanding of criteria in the Public Understanding and Support Assessment Rubric

Beliefs about Teaching and Learning

- 91% of teachers and 90% of students agree with the constructivist notion that successful learning is dependent on the student taking an active role in designing and directing their learning in order to build their own, personal knowledge. When the marginal response of “somewhat agree” is excluded, these percentages remain robust, with 64% of teachers and 59% of students selecting “agree” or “strongly agree.” (Q8) (MM-Learning: Teacher and student roles in learning – UNDERSTANDING)
- Adult respondents to the survey heavily endorsed the understanding that an individual’s ability to learn can grow through effort, use, and support, with 87% of teachers, 84% of community members, and 95% of school board members selecting this description of the ability to learn. (Q16)(MM-Learning: Mental model of intelligence: Understanding of neuroplasticity – UNDERSTANDING)
- 42% of teachers disagree with the notion that grades are an accurate reflection of the learning that takes place in the classroom. This is slightly higher than in prior years, and is greater when compared with community members (24%) and school board members (20%). (Q4) (MM-Education: Understanding of the need to change education to meet demands of a changing world – AWARENESS)
- A broad majority of teachers (88%) disagree with the idea that traditional lectures are the best instructional method for retention of academic content. (Q7)(MM-Learning: Teacher and student roles in learning – UNDERSTANDING)
- Consistent with previous years, nearly all of the teachers (99%) and students (95%) surveyed agree that active partnerships between students and teachers, wherein both are engaged in shaping the learning process, leads to successful learning. This idea is nearly unanimously endorsed by community and school board members. (Q10) (MM-Learning: Teacher and student roles in learning – UNDERSTANDING)

Beliefs about Intelligence and Motivation

- Two thirds of teachers disagree with the position that students who are involved in hands-on learning settings, such as internships or technical schools, do not perform well in the regular classroom environment. 72% of community members and 60% of school board members share this perspective. (Q12) (MM-Learning: Perceptions of alternative learning pathways – UNDERSTANDING)
- Among educators there is wide agreement that most students are capable of mastering college level or advanced technical-school work, with 86% endorsing the position. This represents a small increase when compared with the 2015-2016 sample. (Q17) (MM-Learning: Mental model of intelligence: Nature of expectations - UNDERSTANDING)

- Less than half of teachers (42%) of teachers believe that grades are essential in order to motivate student learning, with only 10% in the “agree” or “strongly agree” categories. The 2016-2017 data on this item is nearly identical to the aggregated data, where 33% of educators chose “somewhat agree” in response to the prompt over the three waves. This demonstrates limited but existent recognition of the importance of intrinsic, rather than extrinsic, motivation. (Q18) (MM-Learning: Mental model of motivation – AWARENESS)

Understanding of Act 77

- 95% of teachers report that they have “some” to “a lot” of familiarity with the current efforts to change teaching and learning in Vermont. The value of 50% of teachers indicating a high level of familiarity with these changes is notably higher than in the 2015-2016 cohort (33%) and the 2014-2015 cohort (43%). (Q1) (Knowledge of Act 77: Components of Act 77 – UNDERSTANDING)
- When asked about Act 77, 3 out of 4 teachers (77%) reported having some knowledge or a lot of knowledge about the act. Also, although the percentage of teachers saying that they had little or no knowledge of the Act has remained the same across the three administrations of the survey, the percentage indicating that they know quite a bit about Act 77 has increased (2016-2017: 29%) (Q3) (Knowledge of Act 77: Components of Act 77 – AWARENESS)
- With regard to understanding of proficiency-based graduation requirements, 94% of teachers reported “some” or “quite a bit” of understanding about the requirements. (Q3) (Knowledge of Act 77: Components of Act 77 – UNDERSTANDING)

Beliefs about personalization, flexible pathways, and proficiency-based evaluation (Pillars of Act 77)

- The overwhelming majority of teachers (97%), students (91%), and community members (99%) believe that learning outcomes will be improved by giving students options to fulfill graduation requirements inside and outside classrooms. 45% of teachers “strongly agree” with this valuation of flexible pathways. (Q11)(MM-Education: Understanding of the need to change education to meet demands of a changing world – UNDERSTANDING)
- Over 90% of stakeholders in all categories supported the idea that giving students the opportunity to have more voice and choice in their education will have a positive impact on education in Vermont. 29% of both teachers and students selected “strongly agree” with this idea. (Q13)(MM-Learning: Teacher and student roles in learning – UNDERSTANDING)

- Similarly, over 90% of all stakeholders agreed that when students have more choice in their learning options and pathways to graduation, motivation is increased. (Q20)(MM-Learning: Mental model of motivation – UNDERSTANDING).
- 98% of teachers surveyed agreed that rigorous alternative pathways to graduation should be expanded to ensure equity of access to education. 34% of teachers selected “strongly agree,” and 88% of students supported this idea, demonstrating a very high level of support for the importance of flexible pathways (Q14)(MM-Learning: Perceptions of alternative learning pathways – UNDERSTANDING)
- Adults who participated in the survey did not, in general, believe that the selection of flexible pathways in high school would have deleterious effects on students post-secondary options, with 76% of teachers disagreeing with the notion. This item did not allow for identification of positive impacts on post-secondary options, however. (Q15)(MM-Learning: Impact of alternative pathways selection on post-secondary choices – AWARENESS)

Need for change

- Consistent with the prior administrations of the survey, a large majority of teachers (98%) and students (92%) agree that teaching practices should change in response to discoveries in how the brain learns. Among teachers, 41% of respondents selected “strongly agree.” (Q6)(MM-Education: Understanding of the need to change education to meet demands of a changing world – UNDERSTANDING).

Mental Models NOT YET consistent with Act 77 and NOT YET demonstrating an understanding of criteria in the Public Understanding and Support Assessment Rubric

Beliefs about Teaching and Learning

- 67% of students agree with the idea that grades are an accurate reflection of the learning that takes place within the classroom. Although the portion of students to endorse this idea is slightly down from the previous year, this demonstrates a traditional understanding of education and the role of grades. It should be noted that middle school students agreed with this statement at a higher rate than their high school counterparts. (Q4) (MM-Education: Understanding of the need to change education to meet demands of a changing world – PRE-AWARENESS)
- Nearly half of the students surveyed (47%) agreed with the notion that lecturing, as an instructional method, results in the highest retention of academic content. Although there is no way to know if or how students compared lecturing to other methods of instruction, this group of students continue to value this traditional teaching method. (Q7)(MM-Learning: Teacher and student roles in learning – AWARENESS)
- In general, stakeholders hold the opinion that learning is primarily the responsibility of the teacher, due to their central role in designing, directing, and supporting student learning. This idea was endorsed by 59% of teachers and 72% of students, a rate that is relatively stable over the three administrations of the survey. However, less than 10% of either group agreed strongly with this notion, which, taken in conjunction with other results, indicates a limited awareness of shared responsibility. (Q9) (MM-Learning: Student-teacher shared responsibility - AWARENESS)
- Student respondents to the survey were less likely than their adult counterparts to fully endorse the concept of neuroplasticity, that the ability of the individual to learn can be greatly influenced through effort, practice, and support. Although a majority of students (61%) selected this option, it was at a much lower rate than teachers (87%), and 31% of students responded that the ability to learn is largely fixed at birth, and can only be somewhat influenced by the environment. Compared to the previous two cohorts, the students in the 2016-2017 survey selected the option describing neuroplasticity at a lower rate. (Q16)(MM-Learning: Mental model of intelligence: Understanding of neuroplasticity – AWARENESS)

Beliefs about Intelligence and Motivation

- A small majority (50.3%) of students agree with the idea that students involved in hands-on learning opportunities do not perform well in traditional settings. This view is shared by 32% of educators, and indicates the continued perception, particularly among students, that technical or vocational programs, internships, or self-designed studies are a place for low-achieving students. These numbers are similar across the different waves of the survey, and show the pervasiveness of a stereotype that vitally needs to be shifted in

order for more students to self-select flexible pathways to graduation. (Q12) (MM-Learning: Perceptions of alternative learning pathways – PRE-AWARENESS)

- A majority of students (64%) identify grades as essential for the motivation of learning. This belief in the importance of the extrinsic reward of grades is shared by a majority of community members (58%). As noted previously, 42% of teachers agree with this statement, and 58% of the total responses over the three waves agree to some extent with this proposition. This indicates that belief in the necessity of grades for motivation is a potential area for targeted discussion to develop these mental models. (Q18) (MM-Learning: Mental model of motivation – PRE-AWARENESS)
- 1 in 4 students disagree with the idea that most students are capable of mastering work at the college or advanced level. Although further research would be required to explore this finding, such a negative belief may keep a sizable portion of students from pursuing post-secondary education due to their pessimism with regards to success. (Q17) (MM-Learning: Mental model of intelligence: Nature of expectations - AWARENESS)
- Although 77% of teachers and 81% of students agreed that high school students have the capacity to design and direct their learning with adult support, the majority of support for this notion was at the marginal level. This criteria is foundational to further pursuit of personalized learning, and when “agree” and “strongly agree” responses are viewed, only 45% of educators and 47% of students affirm this statement. These numbers are similar to the three year aggregate, with educators responding positively to the statement at a slightly higher rate than in prior years (34% in 2014-2015, 32% in 2015-2016). (Q19)(MM-Learning: Student-teacher shared responsibility – AWARENESS)

Understanding of Act 77

- One in three students has little or no familiarity with the current efforts underway to change teaching and learning in Vermont. Although this is a slight decrease from the previous cohorts, only 8% of the respondents in 2016-2017 report that they have “a lot” of familiarity with reform efforts. (Q1) (Knowledge of Act 77: Components of Act 77 – PRE-AWARENESS)
- When asked about the “Act 77: Flexible Pathways legislation,” 70% of students reported little to no understanding of the Act. This is consistent with the past two administrations of the survey. Community members also had little knowledge of Act 77, with 58% selecting little or know understanding. It should be noted that no additional description of Act 77 is present in the survey item. (Q2) (Knowledge of Act 77: Components of Act 77 – PRE-AWARENESS)
- 31% of students report having little or no understanding of the proficiency-based graduation requirements related to Act 77. Unexpectedly, this percentage was higher for high school students when compared with middle school students. However, the lack of familiarity is present in both groups. (Q3) (Knowledge of Act 77: Components of Act 77 – PRE-AWARENESS)

Beliefs about personalization, flexible pathways, and proficiency-based evaluation (Pillars of Act 77)

- One of the critiques of flexible pathways is a potential negative impact on students' post-secondary options. This idea is held by 55% of students surveyed, as they agreed that such choices decrease the options available for them after high school. (Q15)(MM-Learning: Impact of alternative pathways selection on post-secondary choices – PRE-AWARENESS)

Beliefs about purpose of education

- 58% of educators believe that the most important purpose of education is to ensure a successful future for our communities, state, country, and world. Only 19% of students share this valuation, with a plurality (48%) identifying job placement following graduation as the most important purpose of education. This indicates that although teachers tend to be at a level of understanding, their students remain at a pre-awareness level. (Q5)(MM-Education: Collective versus individual mental model of education – AWARENESS)

Discussion

The passage of Act 77 marked a bold step forward for progressive education reform in the state of Vermont. Educators, students, community members, and advocacy groups have worked together to help our educational system realize this promise. The legislation codified flexible pathways to graduation, personalized learning plans, and proficiency-based assessment of growth and attainment into middle and high schools in Vermont. As shown by the results from this survey, the mental models necessary for full realization of the spirit of the legislation, rather than just the enactment of programs that follow the letter of the law, are present at moderate levels. These mental models are generally consistent across different stakeholder groups, with a few notable exceptions. Although the data was collected across different schools and supervisory unions, analysis of the complete data set can be used to indicate the resistance of these mental models to change without targeted effort. However, work done by organizations such as UP For Learning, which empowers stakeholders to collaborate and advocate for the types of teaching and learning laid out in Act 77, can help to shift these mental models among fellow students, educators, and community members. Such a shift could lead to engagement, support, and advocacy towards these types of educational practices.

Framework Results

Viewing the results through the lens the different mental models allows for a refined understanding of the results from this survey. The “Mental Models of Education” framework consists of three criteria, and relative levels of awareness depicted in Figure 1. In general, the results related to this framework indicate awareness to understanding; however, there is wide variation with regard to the idea that education needs to change in order to meet the demands of a changing world. In particular, this comes from a continued perception that grades are an accurate reflection of learning in the classroom. Additionally, there is room for growth with regard to the perception of the collective versus individual purpose of education. While educators and community members perceive a more collective benefit for education, students tend to view education as for the benefit of the individual, with the purpose of building human capital. Given that students perceive themselves as “doing the work” in the classroom, perhaps it should not be surprising that they view the benefit as individual. This construct provides room for exploration and growth.

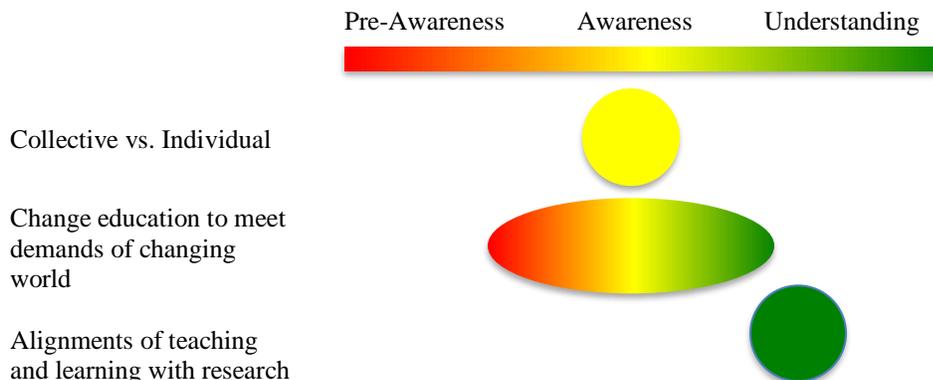


Figure 1: Stakeholder awareness of criteria on Mental Models of Education Framework

The “Mental Models of Learning” framework consists of eight different criteria, seven of which are measured in the survey, and a qualitative interpretation of the sample on this framework is presented in Figure 2. Overall, stakeholders trended towards the understanding level on this framework, with two notable exceptions. First, there is a continued belief that alternative pathways to graduation negatively impact post-secondary choices. This idea is particularly prevalent among students. Closely associated with this idea is the belief that flexible or alternative learning opportunities are for those students who would not perform well in traditional learning settings. Educators and students alike continue to espouse the belief that students in hands-on learning opportunities do poorly in the classroom, perpetuating the stereotype that vocational or self-designed studies are for lower-achieving students. Taken together, these attitudes and beliefs about flexible pathways are a pervasive mental model that must shift in order for all students to be able to benefit from Act 77.

Additionally, with regard to the mental model of motivation, there continues to be an emphasis put on grades and the utility of traditional grading systems to motivate students. Given their first-hand knowledge of their own motivation, student perception that grades are important motivators cannot be discounted. However, given the continued prevalence of standard grading strategies, and students’ multiyear experience in graded classrooms, it is likely that students have not been normalized into non-graded learning experiences. Although these exceptions provide guidance for targeting of programming, all together, the mental model for learning as reported by stakeholders is generally at the “understanding” level.

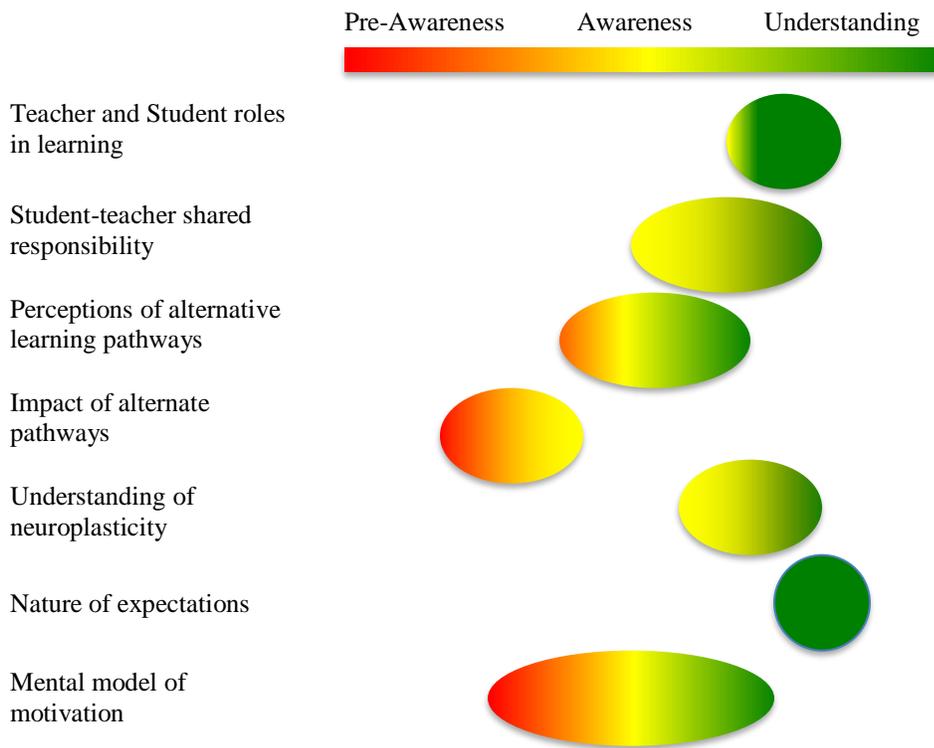


Figure 2: Stakeholder awareness of criteria on Mental Models of Learning Framework

The third framework relates to public knowledge of Act 77. The individual criteria of the framework were not examined in the survey, and Figure 3 presents a general representation of

the responses on the framework. Stakeholders presented a wide range of understanding. In the 2016-2017 data, while stakeholders in general profess “some” to “a lot” of understanding of educational reforms in Vermont, they profess a much more limited understanding when the term “Act 77” is invoked in the question. Although additional surveying would be needed to verify, it is possible that the discordance across the questions that test understanding about educational reform in Vermont is a methodological effect stemming from discomfort or unfamiliarity with the term “Act 77.”



Figure 3: Stakeholder Knowledge of Act 77

Group Comparisons

Results from the different stakeholder groups were generally consistent, indicating that there is a shared foundation of understanding about education in Vermont. However, there are a number of exceptions, which provide additional understanding of the views of stakeholder groups and reveal possible foci for growth. First, as noted in both the results and the above discussion, among students and community members, there tends to be a higher valuation of “traditional” teaching and learning structures, including grades and lecturing. It is likely that students and community members are more likely to have experienced these traditional methods exclusively, while teachers are likely, through preparation or professional development, to have been exposed to additional ways of teaching and evaluation. These results suggest that a shift away from grades will likely need consistent targeted public discourse led by advocates from those in the minority opinion, or from outside advocacy groups in order to shift valuation of grading structures. It also shows that that teachers can potentially lead the way in discussions about the potential of non-traditional presentation methods in the classroom.

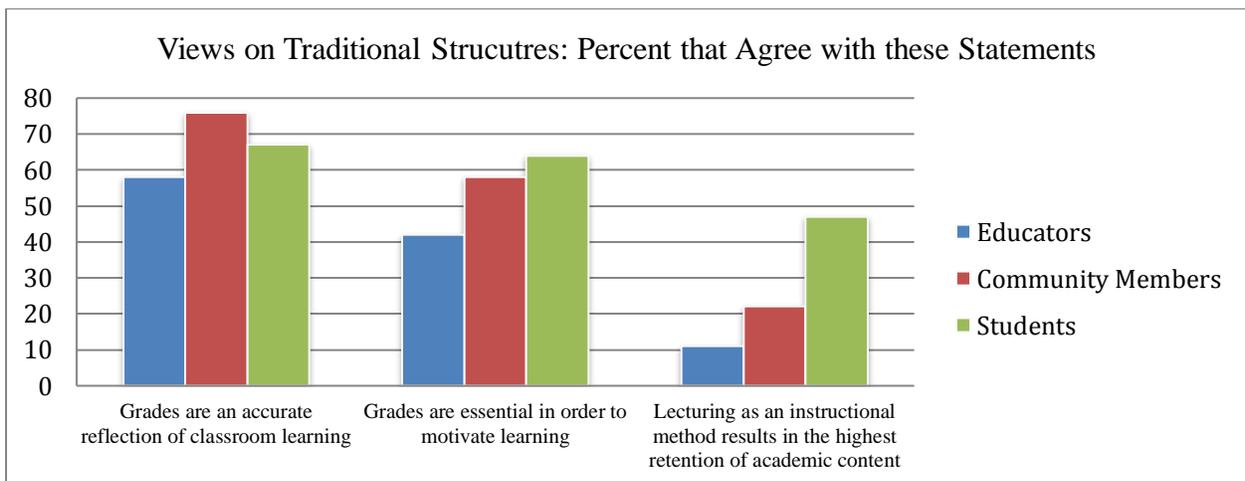


Figure 4: Views on Grades and Lectures

Another difference across stakeholder groups shows the differences in the purpose for education. While educators and to a lesser extent community members held the view that education was for the communal good, students tended to hold the idea that education was for the benefit of the individual. As discussed above, students are actively putting forth their personal effort, and so it should perhaps not be surprising that they focus on the individual benefit. Additionally, cultural messaging frequently focuses on education as a precursor to a quality job and financial independence. Although these teachers tend to see their work as benefitting the entire community, rather than the collection of individuals in their classroom, students are more likely to view their schooling as an investment in their personal future. This indicates the potential for rich discussions about the purpose of education among these groups, and the possibility to leverage this question in activities where individuals take the perspective of individuals from other groups, in order to build understanding of each other. It is around constructs where perspectives do not align that growth towards cross-identity perspectives is possible.

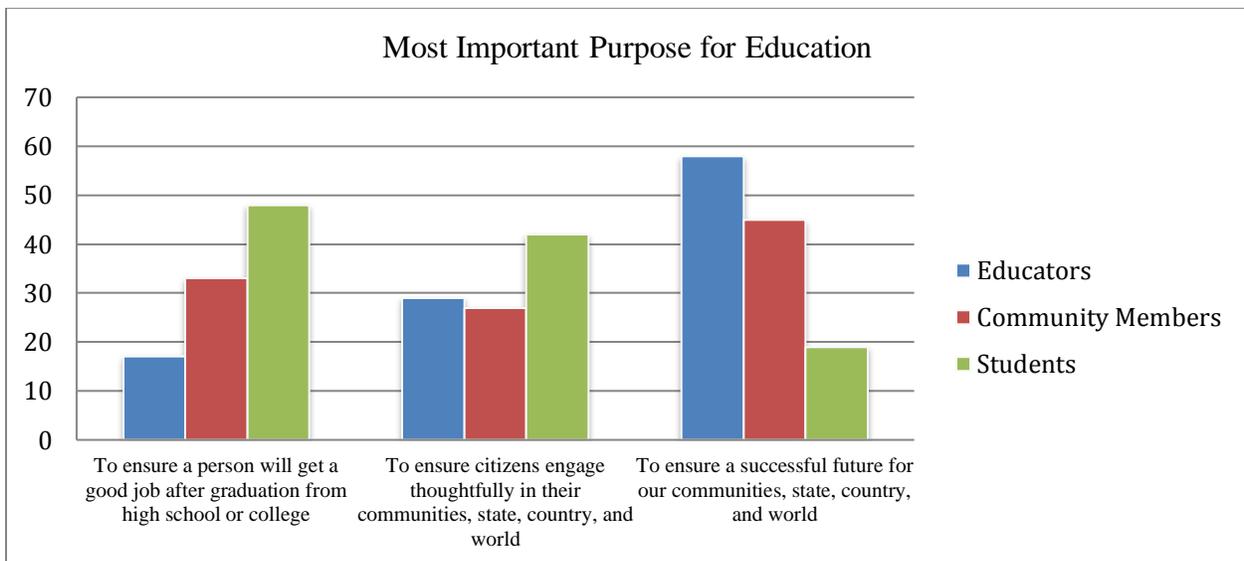


Figure 5: Group responses regarding the purpose of education

Longitudinal Comparisons

Across almost all of the items and frameworks, the data from the three different administrations of the survey is consistent. Since the data was collected at different sites prior to engagement with UP For Learning or similar educational advocacy organizations, it is not surprising that there is not marked growth along the constructs measured by the survey. The similarity in the results indicates that educators, students, and community members did not suddenly begin developing mental models towards understanding, engagement, or support of Act 77 and progressive educational reform in Vermont simply due to the passage of legislation. Rather, growth along these lines depends on the concerted efforts within their immediate community as well as shifts in statewide conversations about education. One notable change in the responses when viewed longitudinally demonstrates this point. As shown in Figure 6, educator and community member understanding of Act 77 and Vermont education reform was

higher in 2014-2015 than 2015-2016, with a return to higher levels in 2016-2017. This somewhat follows public discourse around Act 77 and education reform in Vermont. Following the passage of Act 77 in 2013, main provisions were rolled out in the 2014-2015 school year, leading to much discourse on the reforms particular to the bill, both inside and outside the school walls. With many of the necessary structures in place, public discourse around Act 77 quieted somewhat in the following year. However, with school district consolidation a hot topic in 2016 and with 2016 being an “on” year for statewide elections, education reform and the provisions of Act 77 were once again the topic of public discussion. Cross-referencing with the data, it is apparent that as there is more discussion of these issues, awareness increases. This provides further support for importance of advocacy around educational reform and these mental models of education and learning within schools along with in the broader community.

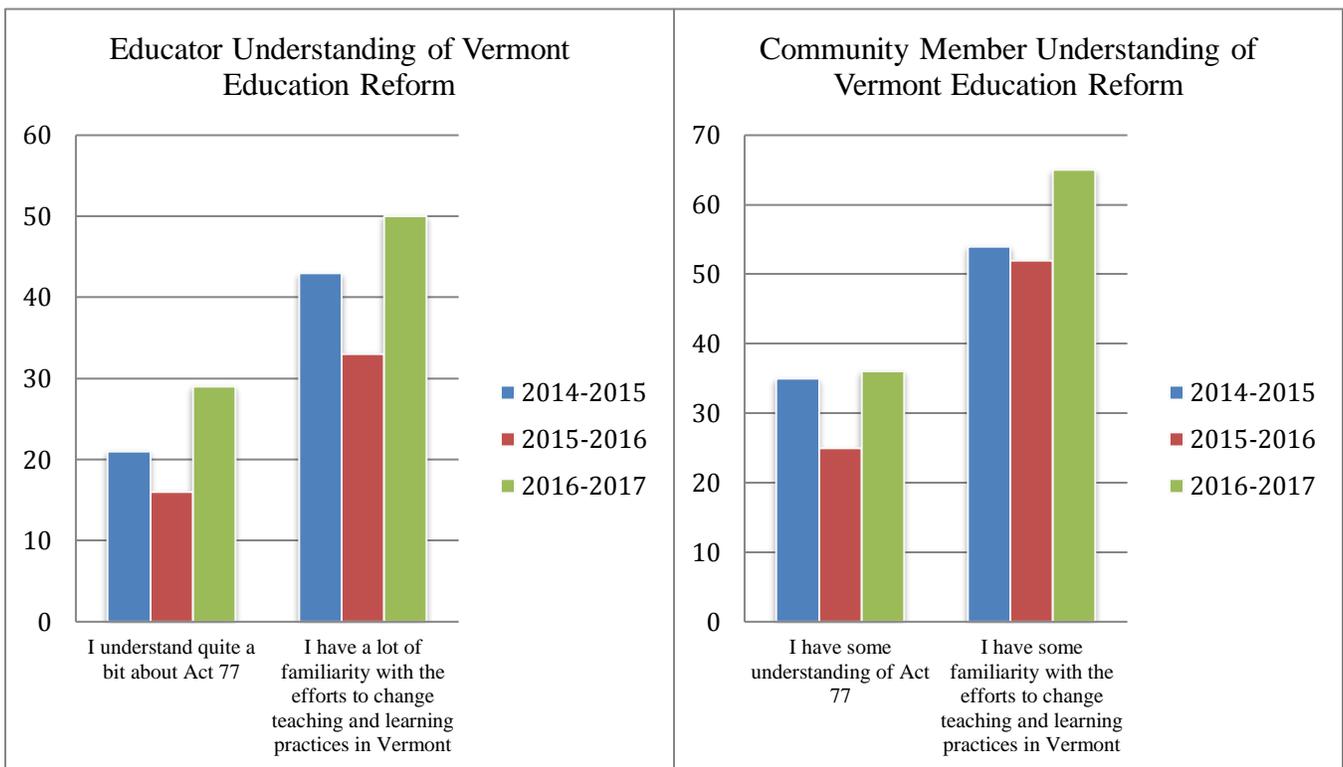


Figure 6: Educator and Community Member knowledge of Act 77 responses over three waves

Continued Work

The results from the Communicating School Redesign (CSR) Mental Models Questionnaire provide a number of points for celebration, along with a number of areas to target advocacy and outreach. Within this work, perspectives regarding one set of constructs can be used as a starting point or as leverage towards shifting perspectives on another construct. The understanding of motivation and the place for grades provides one such area for growth with this strategy. While students and teachers alike hold more progressive views regarding their roles and their shared responsibility, students still tend to value grades as motivators. Starting with the shared understanding that students have a responsibility for their learning and are partners in making and evaluating their own learning, the role of grades and the way in which they are

constructed could be reevaluated. Teacher-designated grades are out of alignment with these roles and responsibilities perspectives. With shared responsibility for design comes shared responsibility for evaluation. Additionally, students and teachers alike think that greater student choice increases student motivation. A critical examination of how grades and other traditional evaluation and reporting structures do or do not fit into this model of motivation could help to push the thinking of all stakeholders.

With regard to mental models of criteria that are vital for the implementation of Act 77, a focus on developing marginal endorsement towards full understanding and support could be effective. As shown in Figure 7, although a majority of educators and students agree in general with the idea that high school students can design their learning in conjunction with teachers, a large portion of that agreement is at the “somewhat” level. Students designing their own learning are central to the realization of the personalization tenet of Act 77. Through discussion, exploration of how such partnerships work, and engagement in structured student-adult partnerships for learning, these more neutral attitudes could be enhanced. Such activities could help create new student and educator advocates for personalized learning.

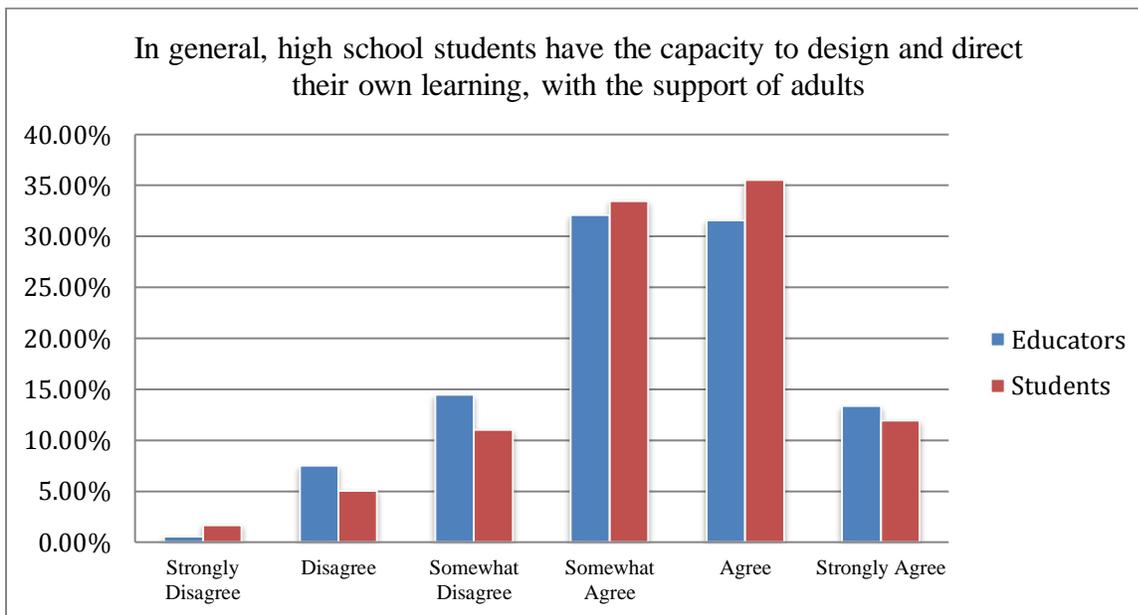


Figure 7: Educator and Student beliefs about high school student capacity for learning design

The differences between groups can also be a starting point for conversations. As noted previously, student perspectives on a number of constructs tended to be at the pre-awareness or awareness level, compared to awareness or understanding levels held by teachers. Rather than viewing this as a deficit, this difference can be an opportunity for individuals to engage across stakeholder lines. It is important for educators to understand how students perceive their motivation and the ways in which they learn. Additionally, it is important for educators to understand how students perceive their practices. Although teachers may hold progressive views, this may not be evident in their day-to-day practices. Honest dialogue that uses these results as a starting point could help educators reflect and for students and educators to build greater understanding of each other.

Finally, the results from multiple years of this survey reaffirm the idea that changes in attitudes do not happen overnight, and they do not happen without concerted effort. For example, while the passage of Act 77 opened up flexible pathways to graduation for all, educators and students alike continue to see these pathways as alternatives for students with poor achievement records in traditional classrooms. The consistency of responses on this pre-survey of attitudes shows that although work to develop these mental models is happening in pockets around Vermont, this work has yet to reach a “critical mass” that would drive a cultural shift. Continued work by organizations such as UP For Learning is necessary to develop the attitudes and mental models held by all stakeholders towards engagement with and support for student-centered and progressive ideas. By building this foundation, the ideals embedded in Act 77 can be fully expressed in our educational systems.



**Communicating School Redesign
Mental Models of Education and Learning
2016-17 Data Overview**

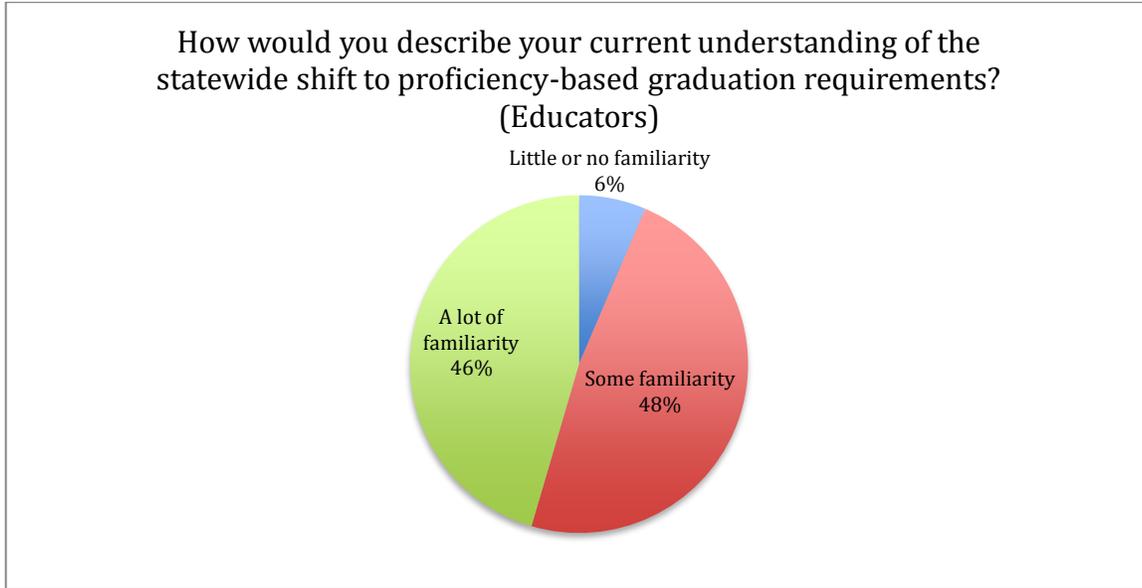
Overview: Over the past four years, 12 Vermont youth-adult high schools (17 teams in total) have participated in a year-long course, “Communicating School Redesign”. Their task is to develop a communications campaign to increase public understanding and support for school redesign. The focus of the first three years was messaging Act 77: Flexible Pathways. Proficiency-based learning was added to the charge this last year.

For the past three years, teams begin their efforts by administering a survey to profile the education and learning mental models of their community stakeholder groups, in order to discern the focus of their campaign. This summary focuses on current 2016-17 data but also references aggregate trends over the past three years.

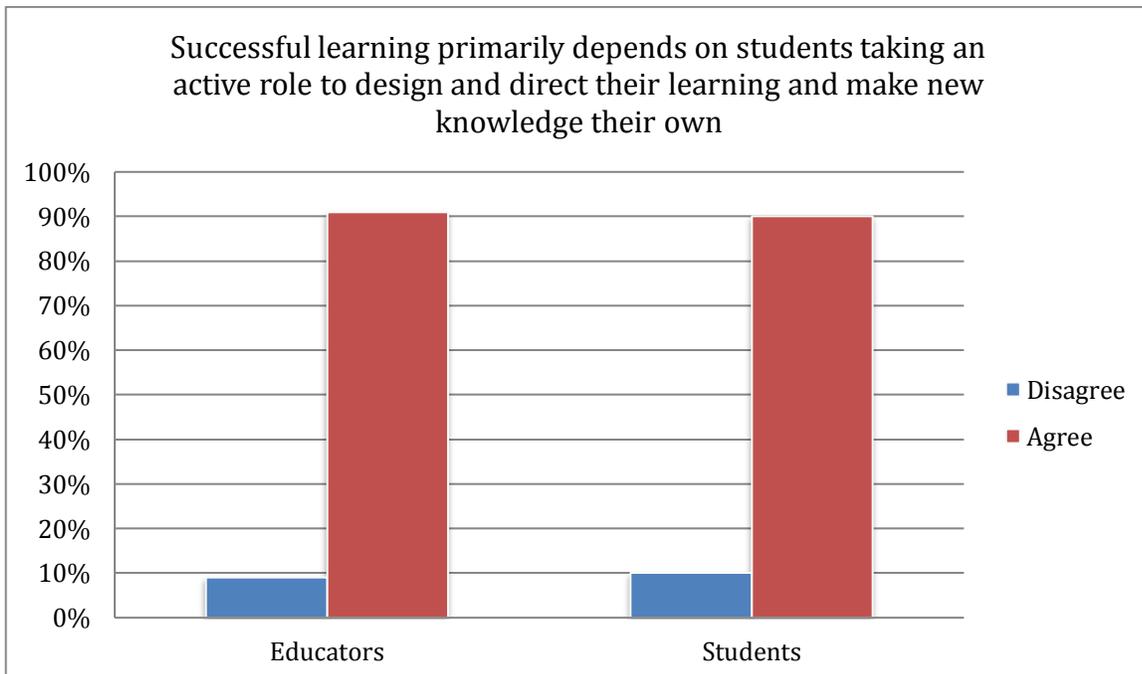
Participants:	<u>2016-17</u>	<u>3-Year Aggregate</u>
Community Members	136	352
Educators	187	538
Students	1255	3059
School Board Members	20	37
TOTAL	1598	3986

Mental Models consistent with Act 77 and proficiency-based learning

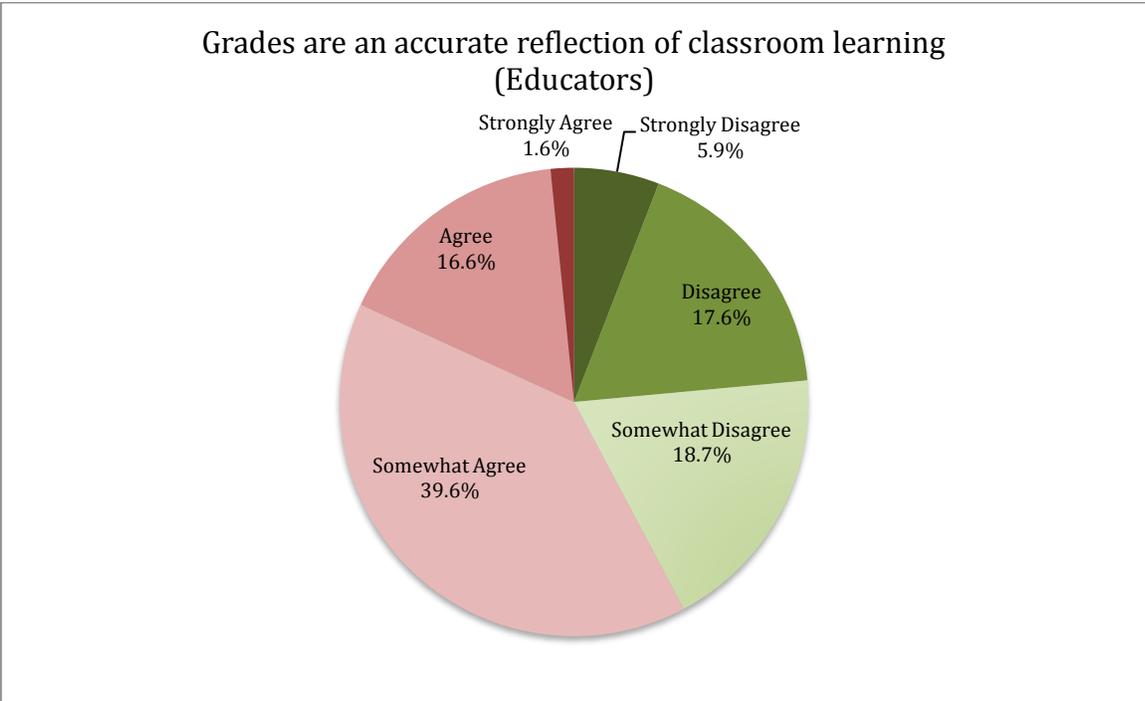
94% of teachers reported “some” or “quite a bit” of understanding about proficiency-based graduation requirement.



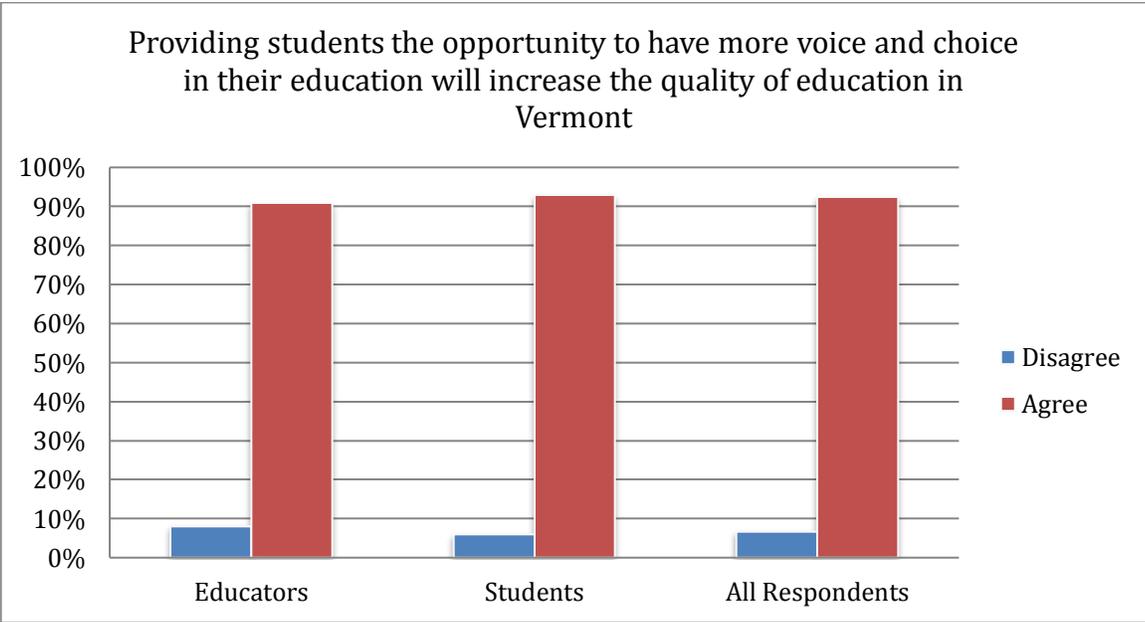
91% of teachers and 90% of students agree with the constructivist notion that successful learning is dependent on the student taking an active role in designing and directing their learning in order to build their own personal knowledge.



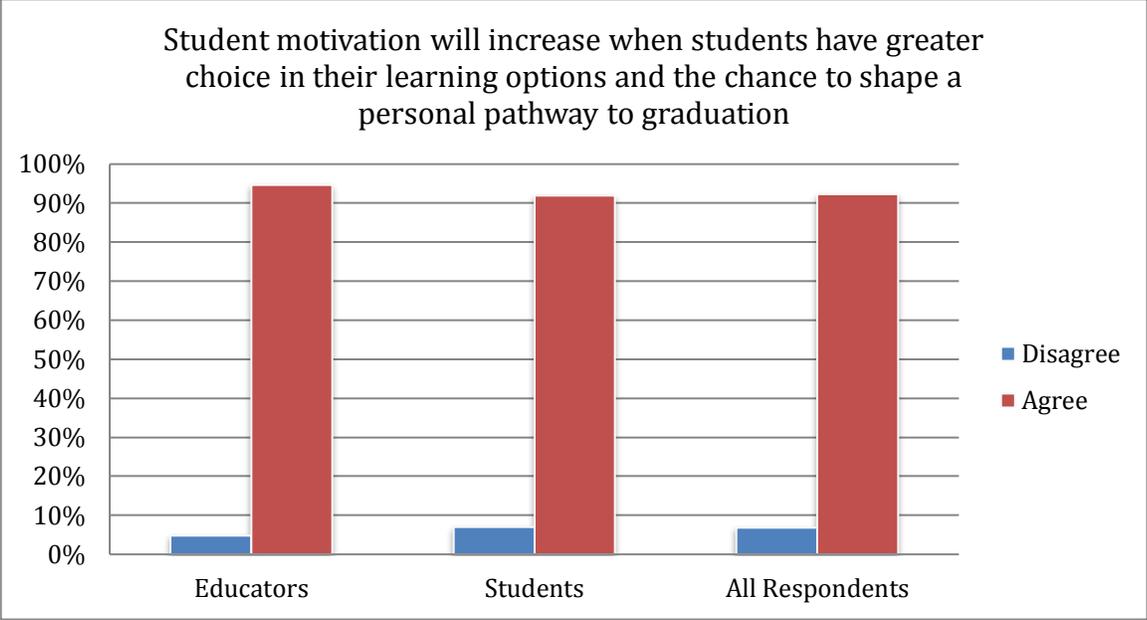
42% of teachers disagree with the notion that grades are an accurate reflection of the learning that takes place in the classroom



Over 90% of stakeholders in all categories supported the idea that giving students the opportunity to have more voice and choice in their education will have a positive impact on education in Vermont.

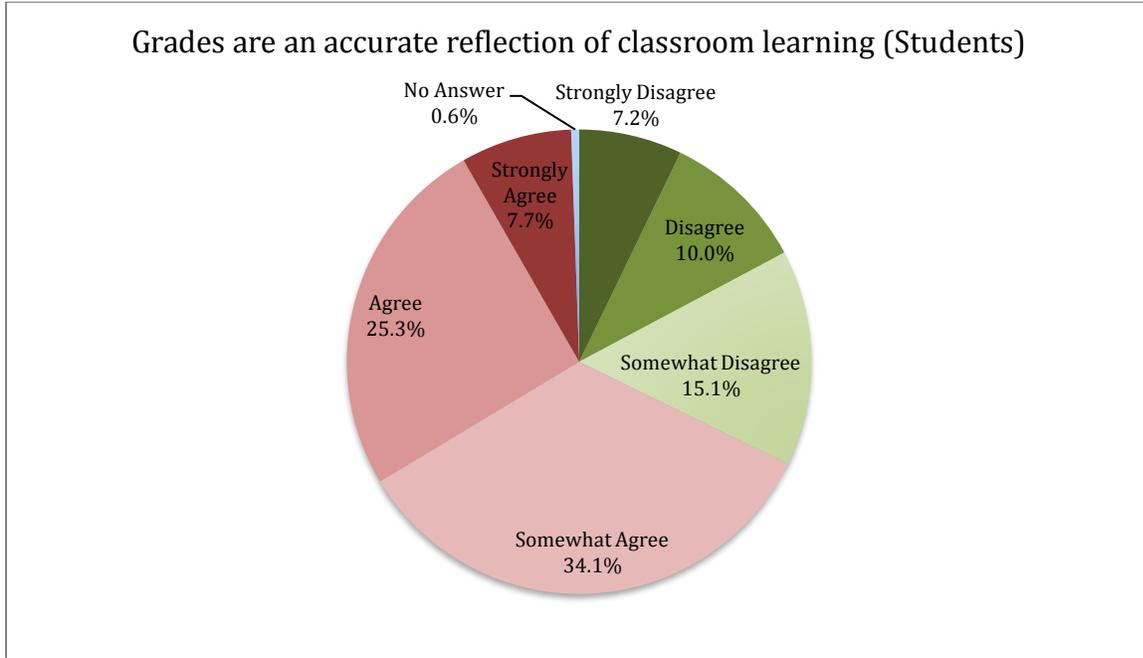


A similar majority supported the idea that student choice will increase student motivation.

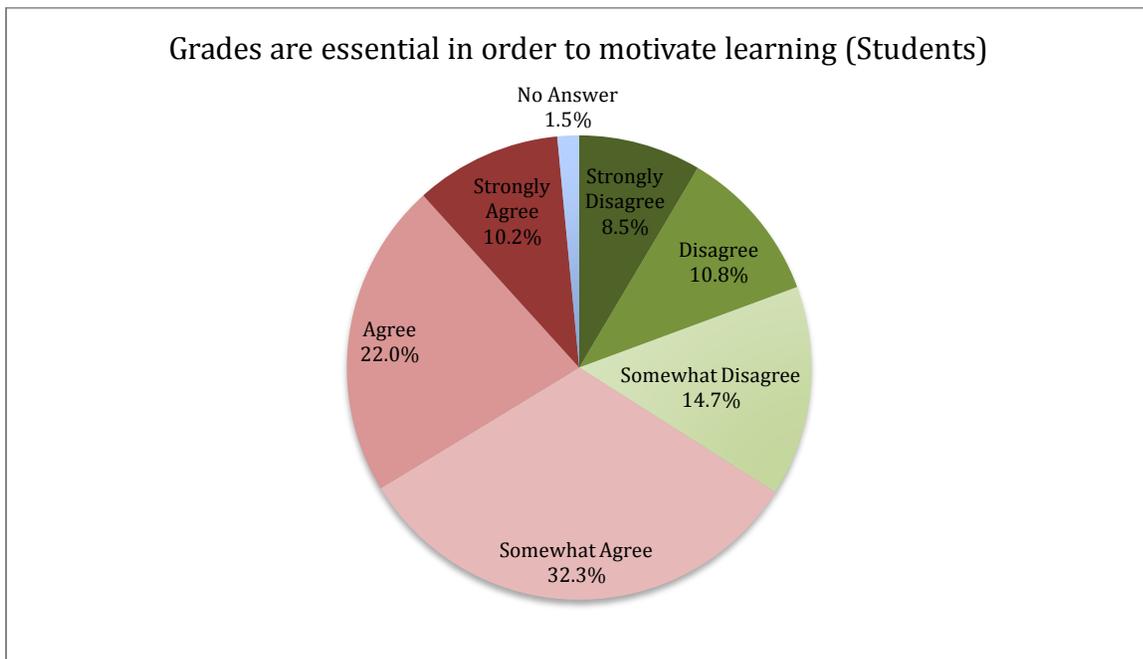


Mental models NOT YET consistent with Act 77 and proficiency-based learning

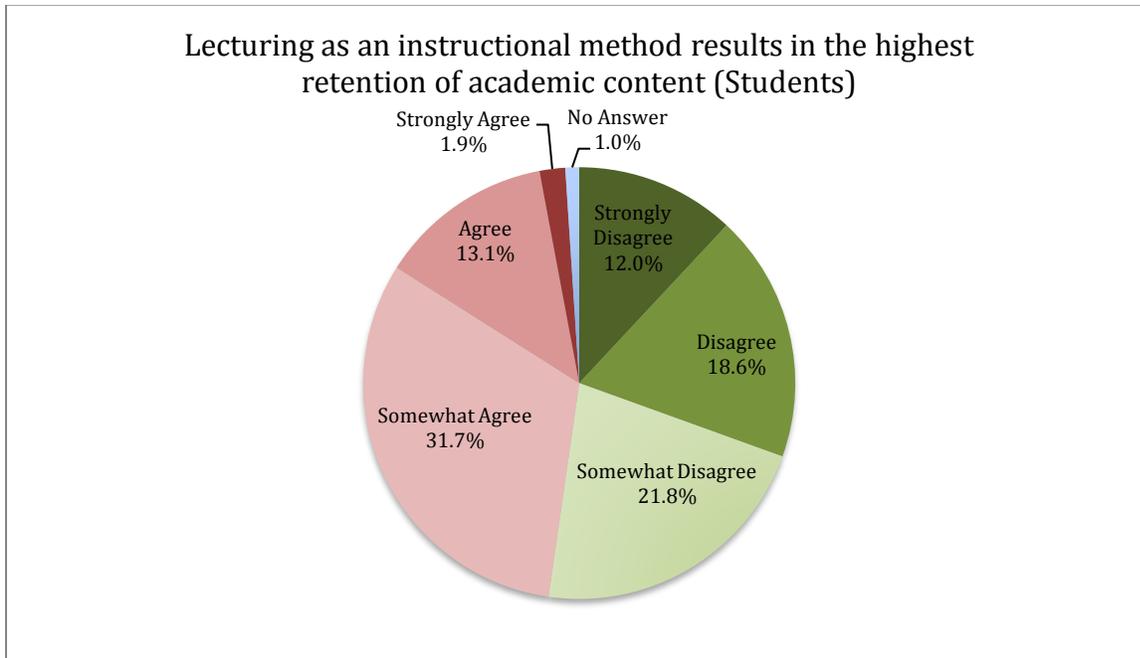
67% of students agree with the idea that grades are an accurate reflection of the learning that takes place within the classroom.



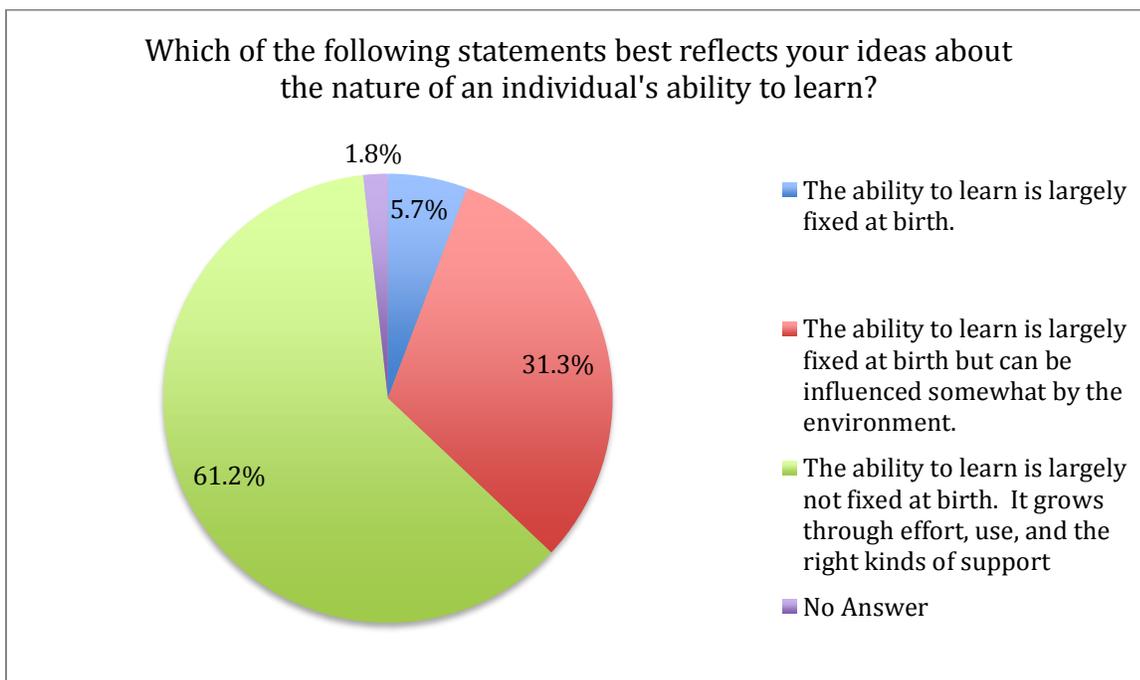
64% of students identify grades as essential for the motivation of learning.



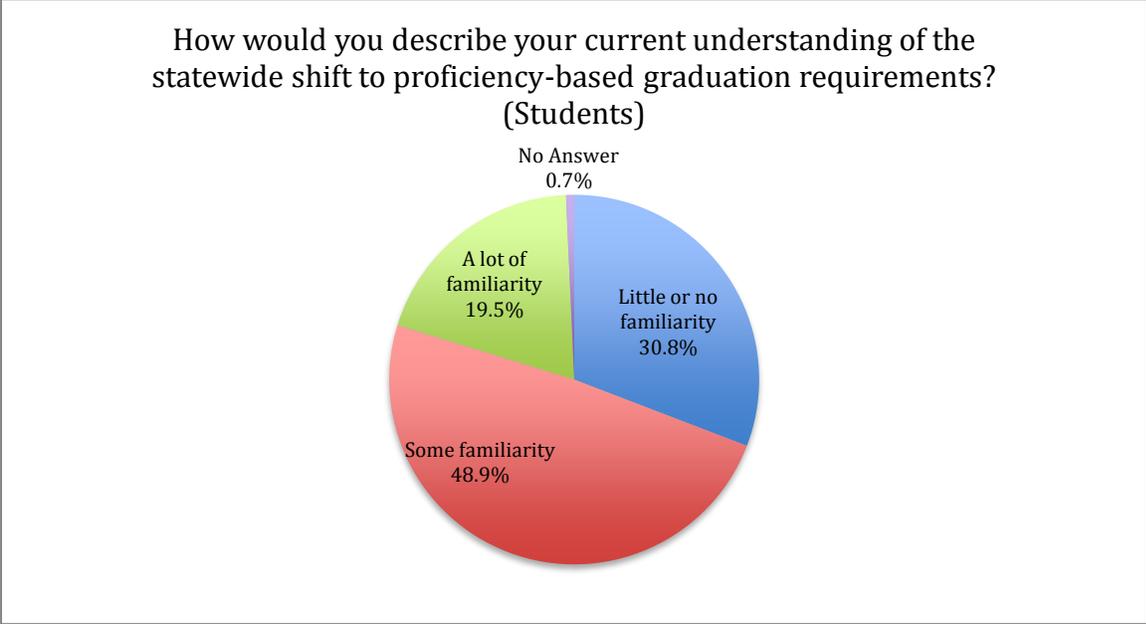
Nearly half of the students surveyed (47%) agreed with the notion that lecturing, as an instructional method, results in the highest retention of academic content.



31% of students responded that the ability to learn is largely fixed at birth and can only be somewhat influenced by the environment.



31% of students report having little or no understanding of the proficiency-based graduation requirements related to Act 77.



42% of teachers believe that grades are essential in order to motivate student learning.

