



Future Vision of Education for Norton School

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Educational Context of Norton School

- Founded in 1955 in Cheshire, CT
- Serves students in k-6
- 425 total students
 - 76% White/ Caucasian, 12 % Asian, 6 % Hispanic, 4 % mixed race, 2% African American (NCES, 2020)
- Median Household income of Cheshire, CT is \$112,945 for the district as a whole, \$151,667 for parents of children served by the public schools in the district (NCES, 2019)
- Recent advancements made include adoption of Responsive Classroom methods, the inclusion of a Reading and Math (RAM) specialist position, and the purchase of 1 to 1 chromebook devices for students in grades 3-6 and shared chromebooks for k-2

Technological tools used at Norton School

The 2020 Horizon Report: Teaching and Learning Edition, acknowledges multiple technologies that are seeing widespread use in learning institutions. Norton uses the following:

Adaptive Learning Technologies (ALT)

- Tools such as Khan Academy, MobyMax, Zearn, and Reading A to Z are used with student population to address individual needs of learners
- ALT allows for personalized learning, which is a central goal of Cheshire Public Schools

Data and Analytics for Student Success

- Tools such as Edulastic, SAM, and Performance Matters are used with student population to track student progress
- Meetings with grade level teachers, the RAM specialist, and administration allow for reflection on practice which has been proven to lead to higher student achievement (Janse van Vuuren, 2020).

Scenarios

- Acknowledges that there are many possible outcomes in the future.
- Take into account the uncertainty of a situation and the myriad of outcomes rather than settling on one most probable outcome in the future.
- Include continuation scenarios, optimistic scenarios, pessimistic scenarios, disaster scenarios, and miracle scenarios. (Encyclopedia.com, 2020).

Advantages

Opens the mind up to new possibilities about the future

Allows for improved communication between employees in an educational organization due to the development of a shared vocabulary

Scenarios are flexible and plan for many different possibilities for the future

The forecasts offered within scenarios give educators the ability to predict future changes as the educational landscape is evolving

Disadvantages

Development of scenarios can be extremely time consuming

Requires large amount of data analysis from many different sources to develop scenarios which again adds to the time it takes to develop them

Can involve quantitative and qualitative approaches, and a more qualitative approach may require the selection of a field of experts which can be a tough task to fulfill

Those who build the scenarios may focus on the most likely scenario, or fall victim to "wishful thinking".

Scanning

- Scanning is a futuring technique that involves the systematic survey of information sources focusing on trends
- Establishes the potential implications and importance of those trends on the organization over time
- Beneficial for educators when done correctly and thoroughly

Advantages

Uses the intellectual capacity of social, economic, technology, political, and environmental experts to provide reliable trend analysis in issue areas

Utilizes data gathered from stakeholders and the student population to analyze the rate of practice change reported by learners

Identifies emerging issues as well as the perceived value of programs from the eyes of the stakeholders and learners in the organization

Encourages a mindset of continuous improvement and encourages educators to change as the educational landscape does

Disadvantages

Extremely time consuming and involves the analysis and application of data from multiple sources across different issue areas

Considerations about the potential impact of issues have the possibility of being inaccurate which can lead to improper allocation of assets in the educational organization

Educational Technology Trends

Increased Use of Learning Outside the Classroom

- Trend that has been on the rise due to the increased proliferation of mobile devices (Dani, 2019).
- Use of Adaptive Learning Technologies (ALT), eBooks, and flipped classroom models have allowed for learning to happen more easily outside of the classroom

Emphasis on Protecting Student Data and Enhanced Cybersecurity Measures

- Schools are looking for new ways to combat cybersecurity breaches, which happen on an average of one breach every three days (SecurityMagazine.com, 2020)
- The Val Verde United School District has employed the use of a high tech security system to protect student data and allow for easy recovery of lost information in the event of a breach
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Use of Virtual Reality (VR) in Educational Settings

- 2010 study in Taiwan explored how teaching with a virtually augmented Sun and Moon System affected 128 Taiwanese fourth grade students' science achievement.
- results show that: (a) students in the treatment group achieved significantly better grades than those in the comparison group under traditional class instruction (Sun, Lin, & Wang, 2010)

Public Policy and Economic Trends

Increase in the Median Age of American Citizens

- By 2050, it is projected that the population will exceed 9 billion, and the number of people over the age of 65 will exceed the number of people under the age of 15 (Glenn, 2014)
- Significant because senior citizens will represent an increased percentage of the U.S. population and due to higher voter participation rates in older citizens, this may lead to changes in voting outcomes that may be unfavorable for school districts (Duncombe, Robbins & Stonecash, 2003)

Reformation in the Educational Funding System

- More states are coming up with funding through multiple sources rather than just using property taxes as the only measure to determine a school district's ability-to-pay
- We may see more states start to use different methods for determining state funding allocations that take into account taxpayer income as well as property values in order to develop a more accurate picture of a district's ability-to-pay
- May lead to increased government intervention to solve inequalities in the public school system.

Demographic Trends

Increase in the Number of Culturally and Linguistically Diverse Students

- Language barriers continue to exist, and income disparities make homeownership more costly for poor families
- History of underserved CLD and ELL students in American School System
 - Disproportionate amount of non-English speaking, especially Hispanic students receiving special education services, being held back in grade levels, or dropping out entirely (Yates, 2008)
- Ethnic Minority becoming the majority, pointing to a possible crisis in the future for public schools if this population continues to be disproportionately having worse educational outcomes (Yates, 2008)

Increase in the Number of Homeschooled Children

- Number of homeschooled children on the rise (NCES, 2019)
 - 1999- ~ 850,000 students
 - 2016- ~ 1,690,000 students
- Recent pandemic and public policy have raised concerns about efficacy of public school system

Vision for Norton School (part 1)

Use of VR technologies will see increased use in classrooms in the next 5+ years

- NGSS framework creates an impetus for decreasing the expenditures on materials to reproduce science experiments that are a large emphasis in the NGSS framework.
- Including VR in the social studies curriculum also provides opportunities for engaging, low cost virtual field trips.
- Immersive 3D models will be used to help visual learners and will add a new element of engagement to the classroom.

An ESL teacher will be hired within the next 5 years

- White students at Norton encompass 76% of the student body, but within the next 10 years, the student body will become closer to 70% white.
- Poor educational outcomes for ELL/ CLD students indicate there is a need for higher quality instruction for them.
- The ESL teacher's job will be to directly instruct at-risk ESL students in English, or provide them with techniques and technology that will enable them to have access to curriculum taught in the regular education setting.

Vision for Norton School (part 2)

Adaptive Learning Technologies (ALT) will see increased use, both at home and in the classroom within the next 5 years

- Norton emphasizes personalized learning, and ALT gives teachers the ability to have students practice skills and learn concepts at their own pace.
- Cheshire has previously tried to employ an ALT platform in 5th and 6th grade in 2017, but parent pushback regarding privacy concerns and pacing of learning led to its end prior to 2018.
- The recent coronavirus pandemic and growing familiarity with ALT platforms such as Zearn and Khan Academy are causing the initial fears about ALT platforms to disappear from the minds of parents in the Cheshire school district.
- Teachers at Norton see the potential of ALT and employ ALT already in math, science, and reading.

Norton School will employ enhanced cybersecurity measures within the next 5 years

- A major security breach happens at a school in the US every 3 days.
- Increased use of technological resources has led to concerns about student privacy.
- Communication with parents about enhanced cybersecurity measures is very important to ensure parents buy in.

Plan for Change

Research based adoption of new technologies, and increased collaboration among staff and community

- Norton school technology committee members and district administrators should collaborate on research to find effective virtual reality uses in the classroom
- Technology committee should analyze emerging educational technology trends and bring new ideas to whole staff faculty meetings monthly.
- District educational technology administrators must work with staff to see which cybersecurity measures need to be taken to decide on the thoughtful adoption of new security interfaces.
- State leaders must encourage the thoughtful adoption of new technology. Norton school should collaborate across many sectors (i.e. schools in the district, early educational programs, libraries, museums, afterschool programs, and parents (Education Commission, 2012)) to find what adaptive learning technologies could prove to be the most useful and beneficial for each subject area.

Allocation of Funds/ Preparation for an ESL teacher

- Norton should propose the ESL position to start allocating funds for the salary of an ESL teacher.
- Norton should also look for Learning Support Teachers that are bilingual and trained in ESL instruction.

Call to Action

Building administrators must start prioritizing professional development that deals with two things: implementation of new technology, and EL student achievement

- Administrators must conduct research and share results of the research in regards to new technologies that can be implemented in the classroom.
- Administrators must give teachers freedom to use and document results from the implementation of new technology in the classroom.
- RAM specialists and administrators should survey teachers to see what their needs are when instructing culturally and linguistically diverse students so appropriate measures can be taken to assist these teachers, which will eventually lead to more support in the form of an ESL teacher.

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