



## AGENDA

The Futures Team workshop was held on 31<sup>st</sup> March 2011.

Notes of all activities follow:

- Pre-Workshop Videos
- 21<sup>st</sup> Century Schools: Overview of Schools for Changing Times
- Wilmington High School (WHS) Background Issues
- Think Tanks

## PRE-WORKSHOP VIDEOS

### Assignment

Workshop participants had been asked to view two videos before coming to the workshop. They were:

- Shift Happens, from the New Brunswick, Canada, Board of Education
- Sir Ken Robinson on Creativity

### Reflections

Working as Table Teams, participants had these comments:

#### TABLE TEAM 1

- "We educate the creativity out of our students."
- "What we're doing won't work in the future."
- Picture of God
- Possibilities are endless
- Use the evolving tech
- Can't predict 5 years
- K's retire in 2065
- 5-15 Professions that don't even exist

#### TABLE TEAM 2

Educate whole being - help students make something of their future

- Adapting
- Flexibility
- Environment
- Student-centered



## Futures Team Workshop 1

## 5.1 Futures Team Workshop



- Technology
- Interdisciplinary learning
- Encouraging students to be willing to make mistakes
- Project-based learning
- Human ecology - richness of human capacity
- Global citizenship
- Creativity
- Blended-learning

### TABLE TEAM 3

- Cutting edge technology that works a must
- Learning occurs anytime & anywhere (24/7) (virtual)
- Need to provide technology
  - iPad
  - Tablet
  - Personal devices
- Education needs to be innovation based, not ignorance & fear based
- Make technology more accessible

### TABLE TEAM 4

- Creativity & literacy equal
- Think out of the box
- Students communicate differently today (technology)
- You need to be wrong to move on
- Things learned today could become obsolete
- Room for flexibility for changes
- Change but don't get away from basics

### TABLE TEAM 5

- Very near future unknown
- \*Whatever it is, we are not equipped
- Raises good questions we are going to have to deal with
- What works now may not work in the future
- We should embrace, not be afraid of it
- Key to change is to educate everyone

### TABLE TEAM 6

- Technology - we can't keep up

- iPad instead of text books
- Creativity is lost - we all need to dance
  - Restructure
    - Classroom space - no desks
    - No more 1950's classrooms
  - Change with the times \$
    - Adaptability - how?
- Phones - can't be a problem in school if it is a laptop
- Alternative ways to educate - it is OK to move
- Fitness Center - teachers/kids/community - pool?
- Change is healthy & good
- Kids are not afraid to be wrong - we need to let them make mistakes - learn

### TABLE TEAM 7

- Overwhelming
- Technology outdated as soon as it is out
- Curriculum needs to keep up with everything
- Creativity key/student strength
- Interesting point - school designed to create professors
- Interdisciplinary
- Students afraid to make mistakes
- Education
- PBL

## 21<sup>st</sup> CENTURY SCHOOLS: OVERVIEW OF SCHOOLS FOR CHANGING TIMES Presentation

Frank Locker presented on the changing values, goals, and deliveries that characterize the most progressive thinking about schools in the United States, and worldwide, today. Key points included:

- 20<sup>th</sup> vs 21<sup>st</sup> century schools:
  - The 20<sup>th</sup> century was a century of creating efficient schools; the 21<sup>st</sup> century has been a century of looking for effectiveness in schools

## 5.1 Futures Team Workshop



- 20<sup>th</sup> century was the century of the teacher; 21<sup>st</sup> century is the century of the learner
- The teacher used to hold all the information; now the teacher is the guide
- Research in learning informs us of many effective educational practices
  - Some are gaining popularity
  - Others are not yet in general practice
- Learning is more effective when students apply their learning immediately
- The Multiple Intelligence theory explains why different students learn best in different ways
- The 21st Century Skills framework has been adopted by the Massachusetts Department of Education. It establishes:
  - Core, subject-based learning is not sufficient any more
  - Learning relevant 21<sup>st</sup> century survival skills is just as important, perhaps more important. These include:
    - Learning and innovation skills
    - Life and career skills
    - Information, media, and technology skills
  - Learning should be interdisciplinary, bridging the gaps between subject areas
  - Learning should be infused with 21<sup>st</sup> Century Themes These include:
    - Global awareness
    - Financial, economic, business and entrepreneurial literacy
    - Civic literacy
    - Health literacy
- Students learn better, and score higher in standardized tests, when they are engaged in Project-Based Learning
- Learning is a social activity. Students learn better when they are in strong, relationships with teachers and peers
- The Relevance and Rigor Framework of the International Center for Leadership in Education correlated Bloom's Taxonomy with application, offering a concise understanding of effective learning
- Teachers' work is supported through strong relationships with other professionals

- Schools are looking for more community connections to improve student learning
- Flexible furniture is needed to bring the student the support to learn in a variety of modalities

### Relevant Issues

#### SCORING

Workshop participants scored worksheets indicating how relevant they thought the issues were to the WHS. The scoring was:

HOW RELEVANT ARE THESE ISSUES TO THE FUTURE WHS? ISSUE	RELEVANT	DON'T KNOW	NOT RELEVANT	SCARY TO ME	
LEARNING PYRAMID	<u>  24  </u>	<u>  6  </u>	<u>  2  </u>	<u>  1  </u>	<u>  1  </u>
MULTIPLE INTELLIGENCES (Gardner)	<u>  28  </u>	<u>  8  </u>	<u>  4  </u>	<u>    </u>	<u>    </u>
RELEVANCE + RIGOR (Daggett)	<u>  16  </u>	<u>  9  </u>	<u>  7  </u>	<u>  1  </u>	<u>    </u>
NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS	<u>  3  </u>	<u>  9  </u>	<u>  9  </u>	<u>  2  </u>	<u>  3  </u>
MAGIC OF 150	<u>  9  </u>	<u> 11  </u>	<u>  9  </u>	<u>  3  </u>	<u>  2  </u>
INTERNET/VIRTUAL LEARNING (Disrupting Class)	<u> 13  </u>	<u> 10  </u>	<u>  4  </u>	<u>  3  </u>	<u>  1  </u>
NEW MEDIA SKILLS (Scotland Film Noir Productions)	<u> 14  </u>	<u>  8  </u>	<u>  5  </u>	<u>  1  </u>	<u>    </u>
PARTNERSHIP FOR 21 <sup>st</sup> CENTURY SKILLS	<u> 28  </u>	<u> 10  </u>	<u>    </u>	<u>    </u>	<u>    </u>
PROJECT-BASED LEARNING (Arlington HS French, HUMEX, New Tech High)	<u> 24  </u>	<u>  9  </u>	<u>  1  </u>	<u>    </u>	<u>  1  </u>
INTENTIONAL RELATIONSHIPS	<u> 13  </u>	<u> 11  </u>	<u>  4  </u>	<u>    </u>	<u>  1  </u>
ADVISOR ADVISEE (Poland HS/MS)	<u> 12  </u>	<u>  9  </u>	<u>  5  </u>	<u>  2  </u>	<u>  2  </u>



## 5.1 Futures Team Workshop



HOW RELEVANT ARE THESE ISSUES TO THE FUTURE WHS? ISSUE	RELEVANT	DON'T KNOW	NOT RELEVANT	SCARY TO ME
FLEXIBLE FOR SCHOOL CHANGE (Hanover HS)	_18_	_10_	_5_	_____
DR KRIS NASH WILL COME TO WHS TO DISCUSS SCHOOL CHANGE (Hanover HS)	_11_	_9_	_7_	_____
NEW LIBRARY CONCEPTS (Wayland HS)	_19_	_10_	_5_	_____
DISTRIBUTED LEADERSHIP (Franklin HS)	_15_	_10_	_3_	_____
NEW FURNITURE CONCEPTS (movable, bean bags, brain based)	_22_	_5_	_6_	_____
NEW CLASSROOM CONCEPTS (Squalicum HS, Steelcase)	_14_	_13_	_4_	_____
APPLIED LEARNING (Canby Applied Learning Ctr, Littleton HS/Chutter's General Store)	_13_	_10_	_4_	_____
INNOVATIVE SCHEDULING (Thos Jefferson HS, Oxford Hills HS)	_10_	_2_	_2_	_____
INTEGRATED/INTERDISCIPLINARY LEARNING (Canby, Thos Jefferson, HUMEX, New Tech High)	_17_	_9_	_2_	_____
SMALL LEARN COMMUNITIES (Hanover HS, Franklin HS, New Tech High)	_8_	_5_	_4_	_____
TEACHER PLANNING CTRS (Oxford Hills HS)	_5_	_3_	_3_	_____
COMMUNITY-BASED LEARNING (Littleton HS/Chutter's General Store)	_3_	_2_	_3_	_____
TEACHER TEAMS (HUMEX, High Tech High)	_5_	_6_	_2_	_____

### COMMENTS

Comments from individual Futures Team members in response to the presentation issues are as follows:

### LEARNING PYRAMID

- Active learning cues help more
- Retention (traditional learning)
- Student to co-teach
- Get away from lecture
- A majority of teachers' lectures don't reach students
- Self-assessment as part of 4yr teacher/student advisory program
- Ways we learn/How we keep it
- Enable teachers to turn pyramid upside down
- Adults, not just kids, learn best by doing!
- Based in research (relevant)
- Active learning has different spatial implications
- If students teach each other, how do they understand what they are teaching?
- Active learning - large tables for groups of students
- Arrived late - didn't see this slide. Sorry!
- Confucius
- Has the idea backwards!
- Students teaching
- I try to follow this
- Retention

### MULTIPLE INTELLIGENCES (Gardner)

- Learning styles directly connected
- Because we all don't learn the same way
- To reach all students
- Teach the whole student
- Learn in all styles
- Because students learn differently
- Classes for all interests/strengths
- Who we are affects how we learn
- Enable all intelligences
- Not just English + Math - creativity
- Finding what is right for kids

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- Traditional
- Personalized learning
- Something we practice already
- Course dependent
- More needs to be done
- We don't learn the same way
- Use strengths
- Always found this important
- Kinesthetic/interpersonal

### RELEVANCE + RIGOR (Daggett)

- Not personal enough. Too general
- Need to deal with unpredictability
- Need to get to box D
- How would it be relevant?
- Students aren't taught analytical situations
- Not sure I like the format of the chart - but the idea is good
- P-BL relates to Multiple Intelligences + Learning Pyramid
- Integrated curriculum
- Layouts don't address how knowledge accesses disciplines
- The "D" quadrant is important, but will it help them pass the MCAS?
- Little application. Disagree about AP courses
- Design of **exp.** - testing of **H? variable**
- Problem solving - team work - creativity
- Wonder what I'd do/think if I didn't know the answer
- Applied learning

### NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS

- Small schools not realistic
- Departmental structure valuable
- 600 students - not practical
- No opinion

### MAGIC OF 150

- Principals/teachers should be close
- People like to be known
- How to optimize relationships/decision making?
- Extensive programming

- This helps the kids feel/know they are important
- I feel like a person, students are known by a majority of administration
- What was this?
- School should feel personal
- I think size more flexible
- Making connections - belonging
- I like the idea of a community of high school students
- Not practical for many curriculums and collaborative decision making
- Some people can remember more people
- Important due to relationships
- KNOW EACH OTHER!
- School structure???

### INTERNET/VIRTUAL LEARNING (Disrupting Class)

- Virtual courses should not take over
- They have to decide how and when
- Is this really the future?
- Retention?
- We already have VHS
- Texting/iPods→students don't pay attention - will have demand for more schooling
- Technology is very important throughout world
- Only for self-directed learners
- Should be supplemental - not primary
- Not personal! No social skills!
- How do they improve interpersonal communication skills through on-line classes?
- Will always need teacher/student relationships
- Need to embrace/consider
- Is it really desired here?
- Because it's true and awesome
- 25% in three years - not realistic!
- Could be - virtual learning closer to personal learning
- Will I have a job?
- Gets closer to multiple intelligences
- Student interest/personalization





### NEW MEDIA SKILLS (Scotland Film Noir Productions)

- Importance of guidelines
- Need to know what kids need in real world
- Δ in core (arts is up) interdisciplinary
- Reality check
- We do a lot already
- ?
- Really not supposed to retain knowledge. Really comprehension valued by employers
- Aren't most of those important skills a part of the subject matter?
- These are more curriculum issues than building issues
- \*Chart is questionable to me but interesting to consider
- Δ in skills for 21<sup>st</sup> Century
- Reinforces what we know
- Employers rate
- Content is ALSO important as it's something to be passionate about - learning!
- Work ethic/professionalism

### PARTNERSHIP FOR 21<sup>st</sup> CENTURY SKILLS

- Core is the same, but flexible
- Been there and have done it when necessary
- 4C's
- This will bring them to 21<sup>st</sup> C. It is hands-on learning
- Focus on Core, not so much 4 C's. No focus on creativity/critical thinking
- Problem solving . . . we increase 4C's via our content area!
- Learning connections engage students
- Arts make Core go up - aka ability to read NY Times and understand it
- Different standards?
- Powerful, personal performing arts facilities
- STRONGLY AGREE!
- Problem solving vs academic knowledge are not mutually exclusive
- Critical thinking, creativity, communication, collaboration
- Need to know there is a world outside Wilmington and textbook
- Input from the real world - interesting

- Multi-discipline - 4C's
- MAKE CONNECTIONS
- "Themes"

### PROJECT-BASED LEARNING (Arlington HS French, HUMEX, New Tech High)

- Projects increase more variety of teaching
- Prepares for careers - life after HS
- Interdisciplinary
- Students learn better with project-learning than teaching to the test
- The possibilities don't even compare
- ?
- Interconnects important + worldly subjects
- Excellent way to include students
- Nice - love it
- Amazing!! ☺
- Interdisciplinary learning - scheduling issues
- Integrate Business into list + we already do
- Better learning than teaching to test
- Multi-level investigation
- Real world applications
- Awesome!!
- AGAIN - CONNECTIONS!
- Performance-based/ex exam

### INTENTIONAL RELATIONSHIPS

- Better learning environment
- Get involved with community
- Communication - relationship building
- Connects school to community
- Yes - great idea
- Love the idea - and Senior Project is becoming more relevant
- Student/teacher, teacher/teacher, etc. week of T/T
- Many relationships needed to ↑ learning
- Already do this and love it - meaningful
- Advisor Advisee (Poland HS/MS)
- Transition MS→9-12→college
- This would prepare students better

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- No Thanks
- Like this structure concept
- Advisor/advisee relationship
- Makes sense
- 9. Transition into HS. 10. Portfolio. 11. Life after HS. 12. Senior Project
- Launching kids

### **FLEXIBLE FOR SCHOOL CHANGE (Hanover HS)**

- Good for integrated teaching but somewhat distracting?
- Good idea to change for what is needed
- Flexibility!
- Collaboration
- Allows adaptation
- Excellent for changing for the future
- I don't like this set up
- Meeting the needs of everyone as well as collaboration
- Suites of rooms
- Much more like college
- Flexibility is good - don't like design
- Sounds like a great concept to me
- Move away from departmental. Interdisciplinary can come with department organization
- On-line today
- Importance of design - to be flexible
- Makes sense

### **DR KRIS NASH WILL COME TO WHS TO DISCUSS SCHOOL CHANGE (Hanover HS)**

- No opinion
- WHS opening this fall
- How on earth to do!
- Are we changing that much? (Interesting idea)
- Yuck
- Great idea! Look at website
- Like flexibility
- Please help us "see." Go onto the website. Go on a virtual tour

### **NEW LIBRARY CONCEPTS (Wayland HS)**

- Libraries important resource area for learning
- Go-through place
- Does not apply well to student
- Makes Library a place to go to
- Have to pass town
- Farmer's Market!
- Center of the school
- Should be at the center of the school
- All for it - seems like a college Library. Why not model at HS level?
- Encourages studying and makes a place of leaving the culture of school
- Shows possibilities
- Media Center - go-there place
- Need to know more

### **DISTRIBUTED LEADERSHIP (Franklin HS)**

- Strategic positioning of things
- Like the idea of guidance being where kids are
- Applies well to student life
- ?
- Love this model
- Barnes & Noble in Library. Guidance where the kids are - off Cafeteria
- Don't like
- Shows possibilities
- Guidance shouldn't be off the Café - too many smells - students bring in food, leaving food wrappers
- Be more in tune with what's happening with the students
- Accessibility! Strategic positioning

### **NEW FURNITURE CONCEPTS (movable, bean bags, brain-based)**

- No bean bags
- Stand-up desks
- Important for educational and usable studies
- VS furniture from website
- Too unstructured
- I want a stand-up desk!

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- Makes school not feel like school
- Love it!
- \*VS Furniture
- Flexibility-durability? Ergonomics important
- Scary
- Like the wheels - as long as you can lock them. No bean bags!!  
Like stand-up desks. Do need stools
- No to bean bag chairs but rest is intriguing
- OK for some areas - study desk - not Science
- Like the idea of modular furniture
- Makes learning comfortable
- Love these
- New age! Like new companies - Google?!

### **NEW CLASSROOM CONCEPTS (Squalicum HS, Steelcase)**

- More light/windows
- This design is very functional
- Hallways, stair landings - flexibility. Re: Multi-tasking - classroom is not accommodating of different learning styles
- Only if self-directed learners
- Black-box Theatre/Lab
- I like breakout space idea
- Easily adaptable. Makes school personal
- Like moveable furniture
- Increase attention/participation. May act to motivate students
- Stand-up desks
- Wasted space?
- Raised floor, modular furniture
- Integration is key
- Love the set-up - Learning Lab - integration important
- Don't know if it's going to work. Will integration work? Does teacher work all the time?
- Wheels/flexible. It's all ok

### **APPLIED LEARNING (Canby Applied Learning Ctr, Littleton HS/Chutter's General Store)**

- Integrated with multiple intelligences
- Social-emotional skills
- Multi-teacher rooms (offices)

- Engineering/BIO/Communications
- Maybe . . . would need a common liaison staff position but isn't it basically a vocational school?
- Common spaces - flexible classrooms
- Application = increased learning
- Very interesting concepts!! ☺
- I like the idea of linking core offices together in same area
- Would need to be relevant to our community. Slide example was not
- Hands-on
- Overlap Core learning + applied learning
- I do this already! Overlapping Core learning + applied learning
- Overlapping

### **INNOVATIVE SCHEDULING (Thos Jefferson HS, Oxford Hills HS)**

- Measurable rubrics on everything
- We NEED to change schedule
- N/A

### **INTEGRATED/INTERSISCIPLINARY LEARNING (Canby, Thos Jefferson, HUMEX, New Tech High)**

- Project-based learning
- 100% project-based learning. 400 student schools
- 100% project-based learning
- For those students that didn't like school, maybe getting involved would maybe help them to look at school differently
- Where is Foreign Language in this idea?
- 100% Project-based learning material taught in time for project. How would that realistically work with language?
- Difficult to get teachers trained and keep it rolling (Cool to partner with arts teacher)
- Project-based learning. 1:1 computerization - double periods? Teacher teaming
- New Tech High - University courses on campus
- So relevant for the teachers and students
- How do we meet state standards?
- Should be looked at!
- Stopped slides
- Yes. Make sense!



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### **SMALL LEARN COMMUNITIES (Hanover HS, Franklin HS, New Tech High)**

- One-on-one learning
- Are the Arts & Humanities important (Core) to their curriculum?
- 100% Project-based learning. Biology and Literature - 180 minute classes - 4 to 5 projects at once
- 100% project-based teachers together
- Need to know more, BUT I know I like the idea of teachers working with teachers

### **TEACHER PLANNING CTRS (Oxford Hills HS)**

- Built-in faculty collaboration
- N/A

### **COMMUNITY-BASED LEARNING (Littleton HS/Chutter's General Store)**

- Community service and connection
- NA

### **TEACHER TEAMS (HUMEX, New Tech High)**

- Project-based good for future career. Team teaching - more knowledge to pass on
- Same
- N/A

### **OTHER**

- Routine reduces brain plasticity
- Goal: 3 most important issues facing WHS
  - New classroom, 4Cs, Applied Learning, Interdisciplinary Skills
- \*No single model (check website)
- Need to go visit Hanover High
- How many students can a principal name?

## Most Important Issues

Table Teams were asked to identify the three most important issues for WHS. Here is their thinking:

### **TABLE TEAM 1**

- Flexible for School Change
- Interdisciplinary Learning
- Partnership for 21<sup>st</sup> Century Schools

### **TABLE TEAM 2**

- Project-Based (self-directed!) Learning
  - Allows us to make meaningful connections & create authentic assessments
- New Library Concepts
- Integrated/Interdisciplinary Learning

### **TABLE TEAM 3**

- Project-Based Learning
- Learning Pyramid
- Interdisciplinary
- Large Common Café (eating area) for teachers

### **TABLE TEAM 4**

- New Library Concept
- New Classroom Concept
- Integrated/Interdisciplinary Concept

### **TABLE TEAM 5**

- Learning Pyramid
- Flexible for School Change
- Applied Learning

### **TABLE TEAM 6**

- Classroom Concepts
- Small Learning Communities
- Project-Based Learning

### **TABLE TEAM 7**

- Multiple Intelligence

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- Project-Based Learning
- New Classroom Concepts

## WILMINGTON HIGH SCHOOL BACKGROUND ISSUES

### NEASC Report

The recent NEASC report recommended the following instructional strategies for WHS:

- Instructional strategies shall:
  - Personalize instruction;
  - Make connections across disciplines;
  - Engage students as active learners;
  - Engage students as self-directed learners; involve all students in higher order thinking to promote depth of understanding;
  - Provide opportunities for students to apply knowledge or skills
  - Promote student self-assessment and self-reflection

### Race to Nowhere

The film will be shown in conjunction with Burlington High School on April 28<sup>th</sup>. Comments included:

- Colleges: many WHS students ill prepared to succeed in college
- We have failed in independent learning

## THINK TANKS

### Student Life

The Table Team Think Tank addressed this question: Why come to school?

- Connect with teachers
- Make access a priority
  - Student to teacher
  - Teacher to student

- Building/services/facilities
- Student to student mentoring personal growth
- More clubs/fun activities
- More diverse ways to get involved - athlete/activity conflict
- Lively environment
- Welcoming environment
  - (Have the equivalent of Wal-Mart greeters)

### High School Organization

#### DEPARTMENTAL

##### Pros:

- Common teaching methodology
- Similar assessment
- Shared PD
- Dedicated spaces

##### Cons:

- Teacher relationship disparate
- Less efficient circulation
- PD compartmentalized
- Isolation

#### THEMATIC SCHOOLS WITHIN SCHOOL

##### Pros:

- Model more like real world
- Facilities PBL
- Strong background for college
- Common interests/goals
- Synergy within group
- Smaller unit

##### Cons:

- Increased staffing
- Extra-curricular possibly impacted
- What if theme not available?
- How easy is change?
- Start-up PD cost



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- Writing curriculum too
- Are these going to be courses or projects?
- Do students create what they think is important?
  - How are projects selected?
- Incorporating technology
- Child care/elderly/other people at school
  - AN INTEGRATED COMMUNITY!

### Educational Delivery in 2030 (or as Early as 2020)

#### What if Clayton Christensen is Right?

- Expands other opportunities
  - Performing Arts
  - Visual Arts
  - Athletics
- Minimizes scheduling conflicts
- Need to create good time managers
- Good college or real world prep
- Allows student work flexibility
- Need collaborating & social space
- Still need variety of size, type, gathering spaces
- Better utilize community resources
  - Town Hall, Library Senior Center, business
- Flexible teacher hours and school calendar
- Increased faculty access hours
- Collaborative work space
- Teacher as facilitator, mentor, instructor
- Geniusbars

## REFLECTIONS + NEXT STEPS

### Today's Workshop

- Work but the right work
- Forced deep thinking
- Had interdisciplinary collaboration
- Shared ideas were abundant

### Next Steps

- Watch the homework video (again)
- Apr 12 Community Forum
  - 6:30-8:30
  - Information on the WPS Website
- Program interviews will be done by the architects
- Meet with Frank & Betsy again