



From Ordinary to Extraordinary: The Role Each of Us Must Play

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Almost everyone wants schools to be better,

but almost no one wants them to be different.

You must make progress on two important, yet divergent disciplines

Disciplines:

Operating Excellence

Innovation

1. Do what we
"Already" do
even better?

2. How to invent
a different
future
for the
student?

Characteristics:

Discipline, Focus

Fast, test and learn, disruptive

Measures:

Consistent &
incremental improvements

Creativity, fast failures,
breakthrough improvements

Themes

- It's All About A System
- Trends That Will Disrupt Us
- 30-60-90

Theme

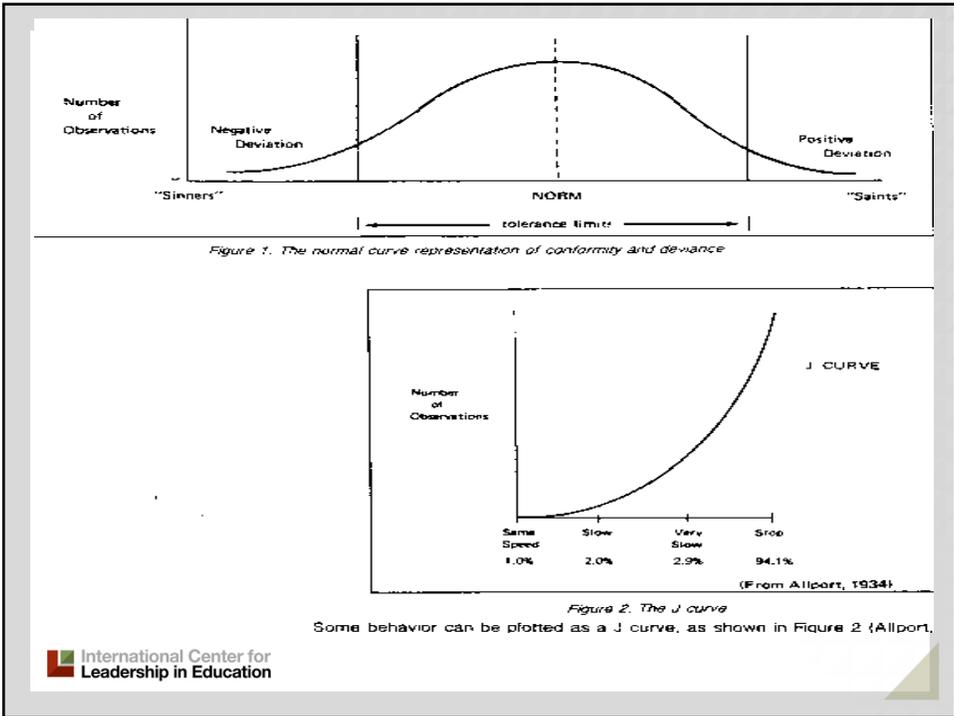
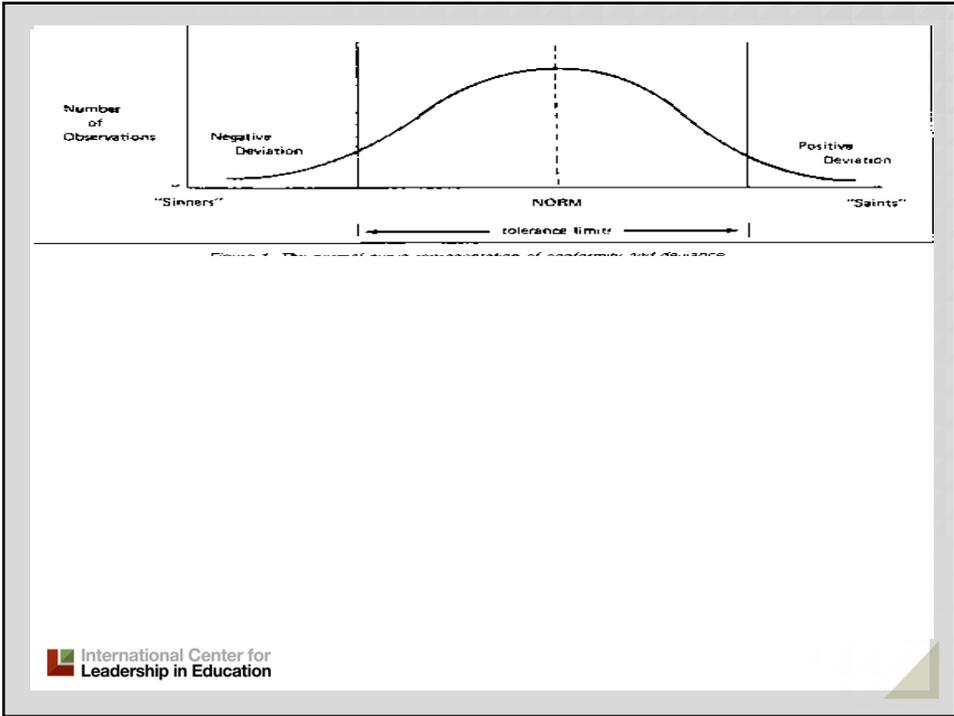
It's All About a System!

Aligned for Success

- Doctors/Nurses in Hospitals
- Pilots in Flight
- Teachers in a School System

BIG QUESTION

- If you could get each of the faculty and staff in your school to do one or two things:
 - very well
 - consistently
 - that would impact learning positively
- What would those things be?



Systems are challenged today like never before and the key challenge that we face is results.

In an environment driven by results, the best strategy is to “DEVELOP YOUR PEOPLE.”

Broaden the definition of learning in your system to include adults.

Why do systems fail?

- Ignorance, we do not have all the knowledge.
- The knowledge exists but we do not use it correctly.

How do you get good at what you do?

- The great seem to have the ability to work through their weaknesses.
- Being just a slight bit better makes all the difference in the world.
 - Diligence
 - Doing it right

If we want to be serious about students' learning, we need to be serious about adult learning. We need to continually implement with fidelity, seek and accept ideas, help (coaching), and accept criticism.

TIGER WOODS DOES!!!!

Solid Implementation

- Focus
- Fidelity of Implementation
- Leading and Lagging Indicators

The focus must be on the way we work.

- **Cooperation** is what was valued in the past. It is about efficiency: “You do this and I will do that.”
- **Collaboration** is where we should focus. It is about shared creation and shared solutions, in which the focus is not on the process but on the specific results, and everyone in the system has responsibility for the results.

Carrot and stick vs. Coaching

- You can't be successful today by being alone, autonomy does not get you to be great!
- Its about discipline
- Its about collaboration

Cowboys to Pit Crews

Independent → *Interdependent*

Turf Protector → *Collaboration*

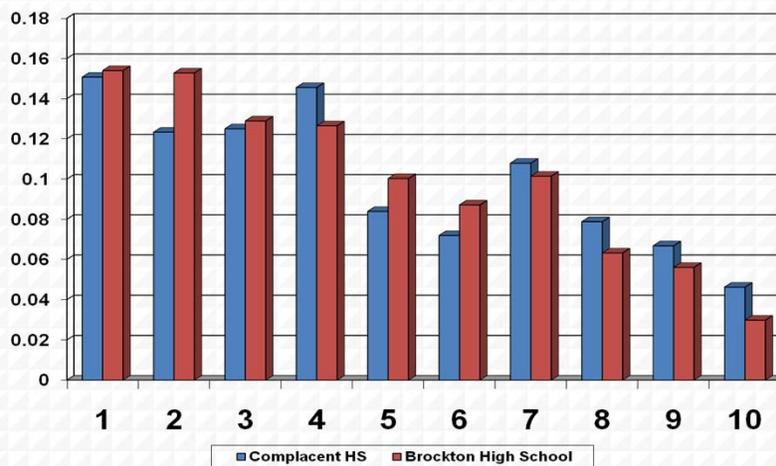
Little Buy In → *Active w/ focus*

Ordinary → *Extraordinary*

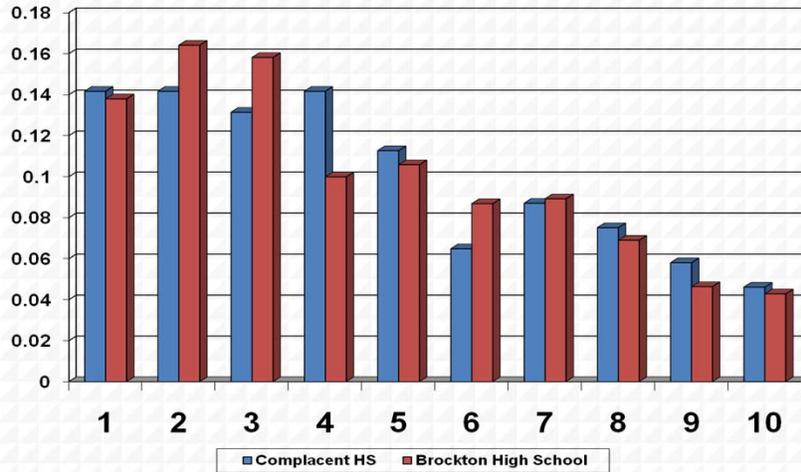
**SUCCESS BY DESIGN
NOT BY CHANCE**

**Simply said, we get what
we design for!**

Proportions of students scoring in each decile
of the MCAS 8th grade ELA distribution

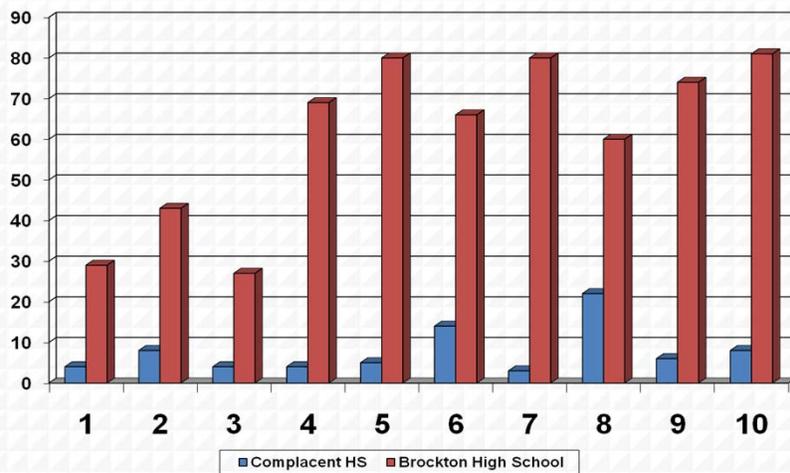


Proportions of students scoring in each decile of the MCAS 8th grade Math distribution

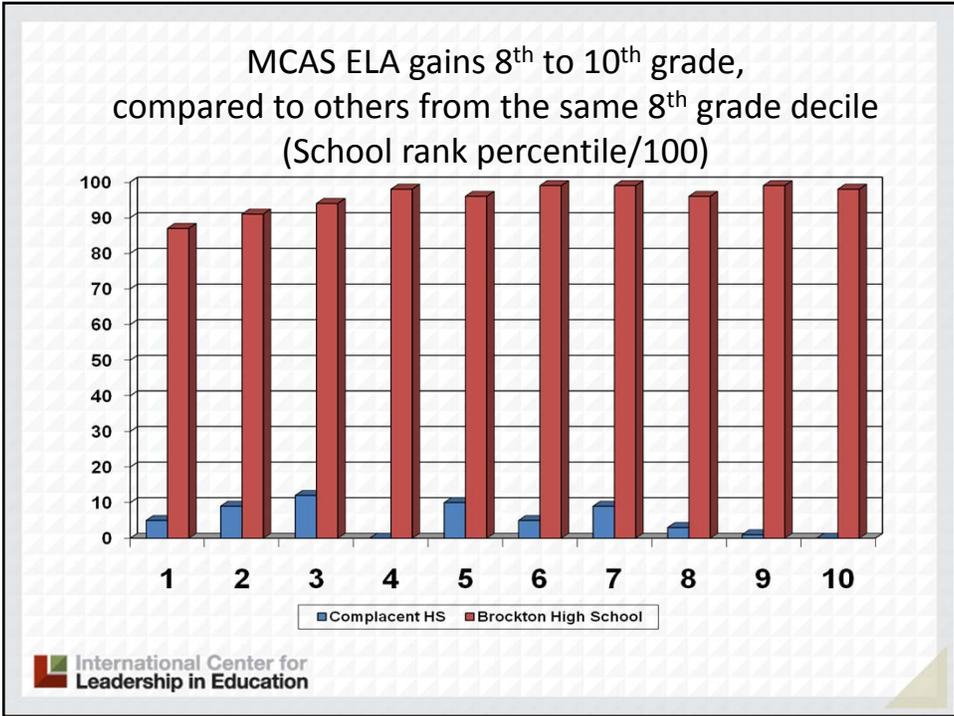


International Center for Leadership in Education

MCAS math gains 8th to 10th grade, compared to others from the same 8th grade decile (School Rank Percentile)



International Center for Leadership in Education



- ## Looking Forward
- Focused and coherent adult learning
 - Allowing people to be all that they can be, thru collaborative focused efforts
 - Build in-house capacity
- International Center for Leadership in Education

The Leadership It Takes

- **Leadership that Combines Passion with Competence:**

All educators effectively cultivate not only a sense of urgency but also a sense of possibility, built on demonstrated expertise among people in key positions and their commitment to continuous improvement.

Ron Ferguson, "Closing the Achievement Gap"



International Center for
Leadership in Education

The Leadership It Takes

- **Streamlined and Coherent Curriculum:**

The district purposefully selects curriculum materials and places some restrictions on school and teacher autonomy in curriculum decisions. The district also provides tools (including technology) and professional development to support classroom-level delivery of specific curricula and high yield strategies.

Ron Ferguson, "Closing the Achievement Gap"



International Center for
Leadership in Education



Our First Training: Open Response

OPEN RESPONSE STEPS TO FOLLOW

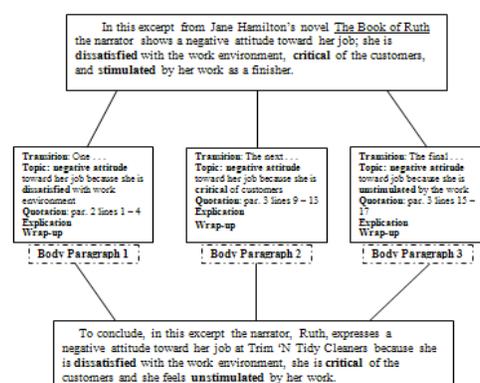
1. READ QUESTION CAREFULLY.
2. CIRCLE OR UNDERLINE KEY WORDS.
3. RESTATE QUESTION AS THESIS (LEAVE BLANKS)
4. READ PASSAGE CAREFULLY.
5. TAKE NOTES THAT RESPOND TO THE QUESTION.
BRAINSTORM & MAP OUT YOUR ANSWER.
6. COMPLETE YOUR THESIS.
7. WRITE YOUR RESPONSE CAREFULLY, USING YOUR MAP AS A GUIDE.
8. STRATEGICALLY REPEAT KEY WORDS FROM THESIS IN YOUR BODY AND IN YOUR END SENTENCE.
9. PARAGRAPH YOUR RESPONSE.
10. REREAD AND EDIT YOUR RESPONSE.

Now I will model the ten steps students will use when answering an open-response item. The following chart includes the training steps that the facilitator will use and an explanation of the work to be done by the participants.

Let's go through the ten steps using *The Book of Ruth* as our sample text.

Here's an example of explaining a step:

5: Take notes that respond to the question. *Brainstorm and map out your answer. Remind students that they should be doing ACTIVE reading. They should use strategies to develop their answer, such as taking notes, circling and underlining key words, and using brackets. Follow reading strategies developed in the workshops.*





So then what...



Follow up the Interdisciplinary Training.

Next step – HOW to bring this into the classroom

- Lessons developed
- Implemented according to a calendar

Step THREE: Implemented with fidelity and a plan



We didn't leave it to chance.
(Success by design, not by chance!)

The implementation was according to a specific timeline...

Chances of Exoplanet Life: Thinkable? Or 100 Percent?
By MICHAEL C. CRUTCHFIELD | The Feb. 2, 2011 06:40 PM ET

Discovery News

Just in case you haven't heard, our galaxy appears to be teeming with small worlds, many of which are Earth-sized candidate exoplanets and dozens appear to be orbiting their parent stars in their "habitable zones."

Barbara Woodruff's Kepler announcement, we knew of just over 500 exoplanets orbiting stars in the Milky Way. Now the space telescope has added another 1,235 candidates to the tally—a total of a difference 24 hours makes.

Although this is very exciting, the key thing to remember is that we are talking about exoplanet candidates, which means Kepler has detected 1,235 exoplanet signals, but more work needs to be done (i.e. more observing time) to refine their orbits, masses and, critically, to find out whether they actually exist.

But, essentially speaking, a pattern is forming. Kepler has opened our eyes to the fact our galaxy is teeming with small worlds — some candidates approaching Mars-sized dimensions!

Before Kepler, plenty of Jupiter-sized worlds could be seen, but with its precision eye for spotting the smallest fluctuations of star brightness (as a small exoplanet passes between Kepler and the star), the space telescope has found that smaller exoplanets outnumber the larger gas giants.

Needless to say, all the talk of "Earth-sized" worlds (and the much hyped Earth-like moon) has added fuel to the extraterrestrial life question: If there's a preponderance of small exoplanets — some of which orbit within the "sweet spot" of the habitable zones of their parent stars — could life as we know it (or also be thriving there)?

Before I answer that question, let's turn back the clock to Sept. 29, 2010, when, in the wake of the discovery of the Earthlike planet Gliese 581 g, Steven Vogt, professor of astronomy and astrophysics at University of California Santa Cruz, told Discovery News: "Personally, given the ubiquity and proximity of life to Earth wherever it can, I would say that the chances for life on Gliese 581 g are 100 percent. I have almost no doubt about it."

Impossible? Or 100 Percent?

As it turns out, Gliese 581 g may not actually exist — an excellent example of the progress of science scrutinizing a candidate exoplanet in complex data sets as they Discovery News colleague Nicole Gladis discussed in "Gliese 581 g and the value of science" — but why was Vogt so certain that there was life on Gliese 581 g? Was he "wrong" to do this option?

Going to the opposite end of the spectrum, Howard Bond, an astrophysicist at Harvard University, made the headlines earlier this year when he announced, rather pessimistically, that stars will unlikely exist on the extreme planets we are currently detecting.

"We have found that most other planets and solar systems are widely different from our own. They are very hostile to life as we know it," he said in a "Science Update" blog post.

Bond's "hostile comparisons" between our own solar system with the interesting HD10180 located 127 light years away. HD 10180 has five planets for a total of the largest star system beyond our own, containing five exoplanets (it has since been revised by Kepler-11, a star system containing six exoplanets as announced by Kepler in 2011).

One of HD 10180's worlds is thought to be around 1.4 Earth-masses, making it the smallest detected exoplanet yet. However, it is not clear if it is a planet or a brown dwarf. The "Earth-sized" world is thought to be around 1.4 Earth-masses, making it a planet, exoplanet, or brown dwarf. It is listed into space as the star HD 10180 b.

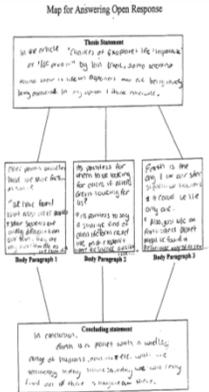
The Harvard scientist even dismissed the Kepler announcement, pointing out that upcoming reports of habitable exoplanets would be few and far between. "Exoplanet systems are far more diverse than we expected, and that means very few are likely to support life," he said.

Both Right and Wrong

So what can we learn about the disparity between Vogt and Bond's opinions about the potential for life on exoplanets, regardless of how "Earth-like" they may seem?

Critically, both points of view concern Earth-Shrew? Life (i.e. as we and the life we know and understand). As we have no experience of any other kind of life, the recent question of interest: how diverse is life as we know it? It is only Earth-like life we can realistically discuss.

Science Open Response



Chances of Exoplanet Life - Open Response

Some scientist think that there is life on the exoplanets that are rapidly being discovered. In an open response essay, state whether you agree with that idea or not. Support your position with at least 3 pieces of evidence and use the graphic organizer provided.

In my view, I believe that exoplanet life is possible. I agree with the scientist who think that there is life on the exoplanets that are rapidly being discovered. I agree with the scientist who think that there is life on the exoplanets that are rapidly being discovered.

The first reason why I disagree with the scientist who think that there is life on the exoplanets that are rapidly being discovered is that the exoplanets that are rapidly being discovered are not Earth-like. They are too far away from Earth and they are too small. They are not in the habitable zone of their parent stars. They are not in the habitable zone of their parent stars.

The second reason why I disagree with the scientist who think that there is life on the exoplanets that are rapidly being discovered is that the exoplanets that are rapidly being discovered are not Earth-like. They are too far away from Earth and they are too small. They are not in the habitable zone of their parent stars. They are not in the habitable zone of their parent stars.

The third reason why I disagree with the scientist who think that there is life on the exoplanets that are rapidly being discovered is that the exoplanets that are rapidly being discovered are not Earth-like. They are too far away from Earth and they are too small. They are not in the habitable zone of their parent stars. They are not in the habitable zone of their parent stars.

In conclusion, I believe that exoplanet life is possible. I agree with the scientist who think that there is life on the exoplanets that are rapidly being discovered. I agree with the scientist who think that there is life on the exoplanets that are rapidly being discovered.

The Impossible Works of M.C. Escher
April 13, 2010 by christina101

Martinus Cornelis Escher is perhaps one of the world's best known graphic artists. He is famous for his woodcut prints, which are often described as "impossible" because they seem to be both two-dimensional and three-dimensional at the same time. During his career, Escher created over 400 woodcut prints, including many of his most famous works, such as "Sky and Water I" and "Reptiles". One of his most famous works is "Sky and Water I", which is a woodcut print that shows a pattern of black and white shapes that seem to be both two-dimensional and three-dimensional at the same time.

Escher was born and raised in the Netherlands. His father was a civil engineer and encouraged him to go to the Royal Art Academy in Haarlem (despite the fact that his father had died before he was born). He was later able to study architecture in Haarlem but he decided to study the graphic arts instead of architecture as his father had wanted. His graphic arts teacher, master Bernardinus de Mooij, was the one who encouraged him to focus on his extraordinary prints and drawings.

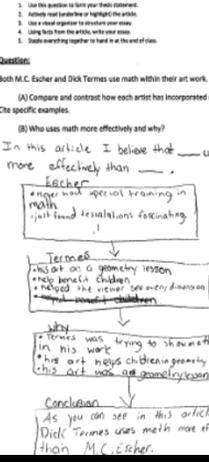
Escher spent years traveling and living in Italy. He was especially interested in drawing the southern Italian landscape, which he used for many of his prints. Further proof that he made the right choice in switching from studying architecture to his although he lived in Rome for years, yet the world-famous architecture was never an interest to him.

Mathematics plays a major role in Escher's work. Surprisingly, he never had any special training in math. His final tessellations particularly fascinated him. This form of geometry, also known as repetitive division of the plane, is a collection of a shape repeated over and over on a single plane without any gaps or overlaps. Traditionally, tessellations were created with rather simple shapes. Escher discovered and experimented these simple shapes in remarkable ways such as "rotational symmetry". In his "Reptiles" series, the tessellations "transform" into changing shapes or even leave the plane itself as in "Ascending". In his lithographs, he often seems to be following a mathematical cycle as black "void" or "empty" or "drawing" of a tessellation and then come out of the drawing, walking back toward it to the same starting point.

The University of Art

Escher's work is a perfect example of how mathematics can be used to create art. His tessellations are a form of geometry that is both beautiful and fascinating. His work is a perfect example of how mathematics can be used to create art. His tessellations are a form of geometry that is both beautiful and fascinating.

Art Open Response



In these articles on Dick Teres and M.C. Escher, one can say that Dick Teres uses math more effectively than M.C. Escher. M.C. Escher is still a great artist, but I get the wrong. Escher still created the ability to create something no one has seen before with his fascinating, impossible tessellations. His way of using objects which are two-dimensional but are impossible to construct three-dimensionally was something no one has seen before.

As for Dick Teres, he used his art straight through geometry. His art helps his viewers in a geometric way by letting the viewer see every dimension of his art. Dick Teres said that his art isn't just art, it's a geometry lesson. His art also can be used to help in challenging kids to explore geometry through art, and you never know if maybe these children can be artists themselves.

The reason I chose Dick Teres in this situation over M.C. Escher is that Teres' math in art had numerous benefits come from it. Dick Teres was helping kids with their geometry skills, which is a huge benefit. Also, he showed them that you can see geometry in every part of your life. For M.C. Escher, he just found tessellations, fascinating and wasn't even specially trained in math.

As you can see, one can say that in these articles, I believe that Dick Teres uses math more effectively in art than M.C. Escher.

Simple Ways to Prevent Sports Injury [Walking, Running, Cycling, Maroon, Dance, Skis... Page 1 of 1]

fitness.com THE GLOBAL FITNESS COMPANY

Simple Ways to Prevent Sports Injury

Sports injuries are common among professional and amateur athletes alike. While just a few adjustments to your fitness routine can help you avoid them, there are many ways to reduce the risk of injury by incorporating these simple things into your routine:

Stretching #1

Stretching before and after your workout is one of the most effective ways to prevent injury. Stretching helps to increase blood flow to your muscles, which helps them to relax and become more pliable. This makes it easier for your muscles to handle the stress of your workout and reduces the risk of injury.

Warming Up #2

Warming up before your workout is another important step in preventing injury. A warm-up helps to increase your heart rate and blood flow, which helps to prepare your muscles for the more intense activities of your workout.

Proper Footwear #3

Wearing the right shoes for your activity is another important step in preventing injury. Shoes that are too old, worn out, or not designed for your activity can increase the risk of injury.

Proper Technique #4

Using proper technique when performing exercises is another important step in preventing injury. Poor technique can place unnecessary stress on your muscles and joints, increasing the risk of injury.

Rest #5

Resting your muscles after your workout is another important step in preventing injury. Rest allows your muscles to recover and repair themselves, which helps to reduce the risk of injury.

Hydration #6

Staying hydrated during your workout is another important step in preventing injury. Dehydration can lead to muscle cramps and fatigue, which increases the risk of injury.

Listen to Your Body #7

Listening to your body and stopping when you feel pain or discomfort is another important step in preventing injury. Pushing through pain can lead to more serious injuries.

Handwritten notes: "increase in your daily life", "very important", "can be avoided", "stretching", "warming up", "proper footwear", "proper technique", "rest", "hydration", "listen to your body".

Wellness/P.E. Open Response

Open Response Questions

Explain how accurate and how could you incorporate prevention into your everyday life.

TOPIC THESIS

Stretching - before/after

Rest - one injury time to rest

Gear - reduce impact

Correct - gives you proper

Conclusion (wrap up statement)

BROCKTON HIGH SCHOOL WELLNESS EDUCATION DEPARTMENT
WELLNESS OPEN RESPONSE

DIRECTIONS: Write your answer to the open response question in the specific area provided.

In the article Simple Ways to Prevent Sports Injury there are four ways to prevent sports injuries; stretching, rest, wearing protective gear, and something as simple as wearing of thotics. The first way to prevent a sports injury is stretching. Stretching helps your muscles loose and they'll be ready when it comes time for you to play. It's important to stretch after because it will reduce the risk of pain and cramps later on. Second is rest. Most injuries are caused from overuse. It's important to give your body rest in between workouts and rest. When you are coming back from an injury, your body needs time to heal and rest. Third is wear protective gear. Protective gear can slow down the impact making it less of a major injury. It's better to wear a helmet you don't need than to need a helmet you aren't wearing. By wearing protective gear you can prevent permanent and life threatening injuries. Finally, wearing something as simple as of thotics. Thotics prevent these causes by giving the feet and legs to step in a more correct and natural way.

You may say this sounds simple but if you do these things into your daily life you can prevent permanent and long term injuries. Stretching before and after can loosen up your muscles, resting can prevent you from overusing your muscles, wearing gear can slow down the impact and correct your posture.

WRITER'S NAME _____ DATE 1-21-11

Evaluated by: Self Peer (Teacher) (Circle One)

SCORING 13-14 = Advanced

CONTENT	FORM	LEGIBILITY	LENGTH
<p>8</p> <ul style="list-style-type: none"> Response contains a clear thesis and thoughtfully answers all parts of the question. Response provides relevant and specific textual evidence. Explanations of evidence are clear and accurate, and demonstrate superior understanding of the material. 	<p>4</p> <ul style="list-style-type: none"> Response contains sophisticated and effective use of transitions and strategic repetition indicating complete control of the material. Response is logically and effectively organized in its thesis, paragraphing, and sequencing of examples. Response contains clear sentence structure with few or no errors. <p><i>Not Repetitive</i></p>	<p>1</p> <ul style="list-style-type: none"> Easy to read 	<p>1</p> <ul style="list-style-type: none"> Sufficient
<p>6</p> <ul style="list-style-type: none"> Response contains a clear thesis and adequately answers all parts of the question. Response provides relevant but general textual evidence. Explanations of evidence are mostly clear and accurate, and demonstrate good understanding of the material. 	<p>3</p> <ul style="list-style-type: none"> Response contains adequate but simplistic use of transitions and strategic repetition. Response is organized in its thesis, paragraphing, and sequencing of examples. Response contains clear sentence structure with no distracting errors. 	<p>0</p> <ul style="list-style-type: none"> Difficult to read 	<p>0</p> <ul style="list-style-type: none"> Insufficient
<p>4</p> <ul style="list-style-type: none"> Response contains a thesis but only partially answers the question. Response provides a mix of accurate and inaccurate textual evidence. Explanations of evidence are vague and/or demonstrate limited understanding of the material. 	<p>2</p> <ul style="list-style-type: none"> Response contains some inappropriate use of transitions and strategic repetition. Response demonstrates lapses in the organization of its thesis, paragraphing, and/or sequencing of examples. Response contains lapses in sentence structure that interfere with the clarity of thought. <p><i>Concluding Paragraph</i></p>		
<p>2</p> <ul style="list-style-type: none"> Response contains a thesis but only minimally answers the question. Response provides insufficient and/or largely inaccurate textual evidence. Explanations of evidence are unclear and/or demonstrate minimal understanding of the material. 	<p>1</p> <ul style="list-style-type: none"> Response contains incorrect or inadequate use of transitions and strategic repetition. Response reflects minimal organization of its thesis, paragraphing, and/or sequencing of examples. Response contains major errors in sentence structure. 		
<p>0</p> <ul style="list-style-type: none"> Response is incorrect. Response contains insufficient evidence to show understanding of the material. Response is off-topic and/or contains irrelevant content. 	<p>0</p> <ul style="list-style-type: none"> Response contains no evidence of transitions and strategic repetition. Response reflects no organization. Response contains little to no evidence of sentence structure. 		

Total Score: 8 / 3.6

11-12 = Proficient
8-10 = Needs Improvement
0-7 = Failing

Brockton High's turnaround FOUR STEPS:



1. Empowered a team
2. Focused on Literacy – Literacy for ALL, NO exceptions
3. Implemented with fidelity and according to a plan
4. ***Monitored like crazy!***
(what gets monitored is what gets done!)

Operating Excellence

Innovation

Disciplines:

1. Do what we
"Already" do
even better?

2. How to invent
a different future
for the student?

Characteristics:

Discipline, Focus

Fast, test and learn, disruptive

Measures:

Consistent &
incremental improvements

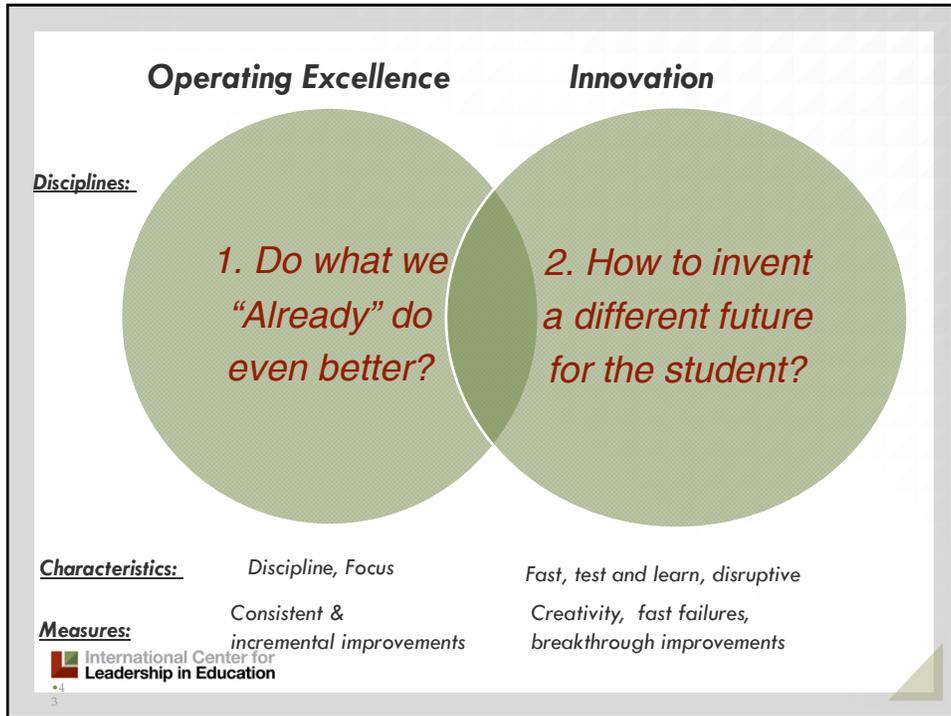
Creativity, fast failures,
breakthrough improvements

Theme

- Trends That Will Disrupt Us

Can you name a few trends impacting us?

1. Online Learning
2. Gaming - LTS
3. Technology-LMS
4. Access to free courses
5. Others.....



Planning is guessing

Unless you are a fortune teller
“long-term planning” is a fantasy.
Timing of long-range plans are backwards; you have better information when you are doing something, not before you do it.

International Center for Leadership in Education

Planning Strategy

1. Long Range Vision

2. 30 Day Plan

3. 60 and 90 Day Plans



Culture Trumps Strategy

- Culture is the set of habits that allows a group of people to cooperate by *assumption* rather than by *negotiation*
- Do we Trust each other?
- Disagreement means what to us at our school?
- Who owns school performance?
- The successful culture allows us to work with each other
 - Accountability - to each other and ourselves
 - Ownership - of the outcomes
 - Commitment - to achieving more each day
 - Belief – that anything is possible if we work together.
 - Will – to continue pressing forward change gets difficult.
- What is your role in changing our culture?



"The secret of change is to focus all of your energy, not on fighting the old, but on building the new." - Socrates

Culture

Culture is a by-product of consistent behavior. If you encourage people to share, sharing will be built into the culture.

As will be trust, etc.



From Ordinary to Extraordinary:
The Role Each of Us Must Play

Raymond McNulty
Senior Fellow ICLE