# Teaching and Learning in the 21<sup>st</sup> Century



# PREPARING TEACHERS IN AND FOR THE FUTURE



### Four Question Exercise

- 1. What will the world be like 20 years from now?
- 2. What skills will you need to be successful in that world?
- 3. How will teaching change to be relevant in those changes?
- 4. What would teacher prep look like if it was designed around your answers?



- They are a changing demographic
  - Multi-generational
  - Tech savvy
  - Social
  - Increasingly Gen Y
  - Connected via social media



- Social Media Savvy
  - Posts to multiple media websites
    - YouTube
    - Vimeo
    - Snap Chat



- Non-traditional learners
  - Non-linear
  - Engaged with multiple modes of learning at any given time
  - Know they have instant access to knowledge



- To them knowledge is—
  - Connected
  - Integrated
  - Utilitarian
  - Just in time
    - Expects to have information available whenever they want it



# WE CAN'T CONTINUE TO PREPARE TEACHERS THE WAY WE HAVE IN THE PAST AND EXPECT DIFFERENT RESULTS



# "Teaching Techniques For the Novice Teacher and the Novice Driver"

Joseph M. Barch A.D.T.S.E.A. Conference July 14, 2014

### **Teacher Training in Vermont**

Currently we have adopted a Hybrid on-line courses.

Currently Rich Hanson provides on-line instruction, assignments, posts and feedback.

I provide support in a face-to-face setting and in the hands on laboratory for the two courses. Extraordinary Zone Control and In-Vehicle Teaching Techniques.

### This afternoon's topics:

- 1. Vermont's choice to go hybrid.
- 2. Techniques to Prepare new teachers.
  - a. Hands on

activities

- b. Video
- c. Collaboration

- 1. Preparing Novice Drivers (The new educational "BUZZ" words
  - a. engagement
  - b. STEM Learning

(Science, Technology,

Engineering, and Mathematics)

c. Student

Centered/Directed Learning

d. Learning Management

**Systems** 

- e 21st Century Learning
- f. Proficiency based

**learning** 

How does this relate to how driver education will look in the near future?

- 1.Potential for growth!
- 2. Challenges that we need to overcome.



#### Vermont's Hybrid Driver Education courses

We needed to change how we provided training because:

- Changes within the Department (Now Agency) of Education.
- Higher Education Collaborative required more numbers and less costs. (The HEC is the new provider for courses)
- Lack of trained certified providers. (This is a growing concern!)
- Cost of travel, food, and lodging were growing
- Logistics



### **Training Novice DE Teachers**

My role in the process is to provide face to face contact and support.

Provide and support hands on learning

Provide feedback and evaluation on

teaching skills

Demonstrate in-vehicle teaching skills and some classroom techniques

### Video use:

New teacher practice

#### How could you use video as a training tool?

**Classroom Instruction** 

Can You Think of Others?

practice instruction

Student Assessment **Teacher assessment** 

**Developing Searching Skills** 

**Evaluation** 

**Route Planning** 

**Self-evaluation** 

Practice Commentary

### Video use:

New teacher practice



### **COLLABORATION!**

One of the synergistic outcomes from this process has been group collaboration.

Whether out of necessity, or inspite of our best efforts, teacher trainees are collaborating in their learning.

They are in fact so invested that they want their colleagues to be as successful as they themselves want to be.

#### **COLLABORATION Cont.**

Look at collaboration, it is engaging, student centered and student driven.

Look at the work of Dr. William Glasser Control Theory In the Classroom and Johnson and Johnson and their work in cooperative learning.

It is one of the concepts of 21st Century Learning!

# How is preparing new teachers different from teaching students?

#### It's Not!

- 1. We need to model best teaching practices, so that they can be used in the classroom.
- 2. The way our students learn is changing; educational practices are changing. We need to keep abreast of those changes.
- 3. We need to prepare driver education teachers to effectively teach today's students.
- 4. We need to demonstrate that our field is current and relative to being life long learner!

# HOW IS OREGON PREPARING TEACHERS



#### The Past

- Three Classes
  - Foundations of Traffic Safety Education
  - Fundamentals of Classroom Instruction
  - Fundamentals of Behind the Wheel Instruction



#### **How About Now**

- Traffic Safety Instructor Training
- Pedagogy 1
- Pedagogy 2
- Face-to-face (Six weekends)



## Oregon Playbook

- Online Version of the Playbook
  - Used for teaching the driving task



# Teacher preparation should have its roots in..

- Meaning, not memory
- Engagement, not transmission
- Inquiry, not compliance
- Exploration, not acquisition
- Personalization, not uniformity
- Collaboration, not competition
- Trust, not fear



# ASSUMPTIONS ABOUT DRIVER EDUCATION AND TEACHER PREP



I understand the driving task



 I can communicate the key behaviors to perform the driving task.



 And because I am enthusiastic I will be able to teach driver ed with little problem



 I don't need an education in how to teach driving



 I know the laws of my state and can communicate them



- And because I am a professional driver I don't need to adopt your system.
- When I was a cop I had all the training I needed
- I thought this was going to be a easy class
- I can help a kid get his license
- I thought it would help drop my insurance rates



# We've created false proxies for teacher prep...

- Finishing a course or textbook has come to mean achievement
- Finishing 120 Hours of teaching coursework makes you a driver educator
- Listening to lecture has come to mean understanding
- Getting a high score on a standardized test has come to mean proficiency



# What do we need to teach our future teachers?





### 10 Skills for Modern Teachers







#### **New Directions in Education**

Preparing Novice Drivers (The new educational "BUZZ" words)
engagement
STEM Learning (Science, Technology, Engineering, and Mathematics)
Student Centered/Directed Learning
21st Century Learning
Proficiency based learning

Learning Management Systems

# STEM

What is STEM Learning

# STEM Cont.

**STEM Learning** 



#### **Driver Education and STEM**

Driver education can (or does) connect to all fields of knowledge!

WE NEED TO MAKE THE CONNECTIONS!



# Engineering & Driver Education both apply knowledge to solve problems!

Engineering Design Method

Define a problem!

Research the Problem

Design, plan, and build a prototype or solution to be tested

Test the prototype or solution to see if it solves the problem.

Analyze the results and improve the solution to the problem.

Communicate the results and implement or market the solution as a product or service!

Repeat the process with refined or new problems that arose in the process

The ABC's of Zone Control

Alert Switch on FIND LOS-POT Changes

Before Acting check other zones and SOLVE the Problem!

Create time and space management:
get the best Lane position;
Speed Control
and Communication



### **TECHNOLOGY**

Webinairs (Web based learning)
Internet
Youtube
Google Drive/Google docs (This presentation was
developed in Google Drive)
Learning Management Systems
In the future Virtual Reality?

## YOUTUBE

How many of you remember this?

No Zone



#### **LEARNING MANAGEMENT SYSTEMS**

Moodle

Edu2.0

Schoology

Many more...

"I know what I like.... because I like what I know"

Professor Reverend Edward Sutfin

So Here it is....

SCHOOLOGY!

# 21st Century Skills

21st Century Skills

## **Proficiency Based Learning**

**Proficiency Based Learning** 

#### How does this relate to how driver education will look in the near future?

Where are Blockbuster Video stores? What Happened to them?

They have become extinct, Why?

They did not adapt to new and changing business market.



#### CHALLENGES & OPPORTUNITIES

I have a friend, he works in our bus garage, he is the chief mechanic and drives bus. I'll ask him how he doing and on particularly busy days his response is:

"The day is full of challenges and opportunities"

Usually with a smile!

Today, <u>WE</u> have challenges with opportunities to grow our Profession

## CHALLENGES

To incorporate new and future trends in education

To become proficient in the use new and future technologies

To provide training and professional development for our profession.

To increase the number of Researchers and Higher Education professionals.

To develop new models for training.

#### **OPPORTUNITIES!**

To improve training and instruction for novice teachers and drivers.

To better meet the needs of today's students.

To improve our ability to have students become lifelong safe drivers as well as life-long learners.

To reestablish our discipline in the educational community by demonstrating that we already integrate with current trends in education!

# **A Training Model**

Research & Development Phd. Level

TOT University level on-line providers

**TOT** regional hands-on or laboratory providers

**Mentors** 

**New & Novice teachers** 

#### **NEEDS**

- To develop more Master's degree and higher programs in order to provide training, research and development.
- To identify more TOT's and Mentors.
- Recruit new teachers.
- Funding sources for development and continuing education.
- To Think WIN-WIN for Curricula.

#### **REWARDS!**

If we accept the challenges before us as opportunities for growth we will:

- Improve the quality of driver education
- increase numbers of teachers
- improve our standing in the field of education
- become national leaders in safety & <u>education!</u>

## Can you help me?

### **Innovations**

- Twitter in the Classroom
- AirScanner
- Socrative
- iPad Apps



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## If you want here is something extra on OPPORTUNITY

How bad do you want it?