



Open Learning For All

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THANK YOU



The 8th TCU International e-Learning Conference 2017

Innovative Innovations in Education

BITEC Bangna, Bangkok, Thailand

July 20-21, 2017

**Talent is equally
distributed in a
society but
Opportunity is not.**

**Education
Empowers Talent
and Enables
Opportunity**

**Education is one of the
most powerful social
and economic change
agents in the world.**

**Free and Open Educational
Resources hold the promise
to empower TALENTS and
enable OPPORTUNITIES
for ALL!**

- **Open Educational Resources (OER)**
- **OpenCourseWare (OCW)**
- **Open Enrollment (MOOC’s)**
- **Open TextBooks**
- **Open Access Journals**

OPEN = Free of Cost

= Permissions to Use

**= Free to Choose How to
Learn In Your Context**



การเรียนรู้ตลอดชีวิต

พัฒนาให้คนไทยก้าวทันโลกที่ไม่หยุดนิ่ง

Thai MOOC (Thailand Massive Open Online Course)



WHAT IS THAI MOOC ?

TCU-MOOC
TCU001

Thai MOOC Help

MU-MOOC
ThaiMOOC101

การพัฒนาวิชาและจัดการเรียน

CRRU-MOOC
crru001

การออกแบบสื่อสามมิติด้วย

CRRU-MOOC
crru002

การออกแบบภาพอนิเมชันด้วย

**Free and open educational
resources have been
around for over 20 years**

**WHY HASN'T EDUCATION
BEEN TRANSFORMED by
OER Innovations?**

Why Haven't OER Innovations Gone VIRAL?

INNOVATION Lifecycle

- Visions of a better future by doing things differently– **IDEAS**
- Sharing **ANTICIPATED** benefits of the innovation – **POLITICS**
- Institutionalizing innovations– **IMPLEMENTATION**

Step 1: IDEAS

**Takes 1 person to
create ideas.**

Step 2: Politics

**Takes a few people
to market benefits.**

Step 3: Implementation

**Takes a lot of people,
resources, and time to
integrate innovations
into everyday life.**

**Implementation is
where innovations fail.**

**How can we help OER
succeed and OPEN
LEARNING FOR ALL?**

**Implementation
Strategy
For
OER**

**Enabling
Ecosystems**

with policies, leadership,
business models

Developing Demand

with communications, training,
professional development

Creating Capabilities

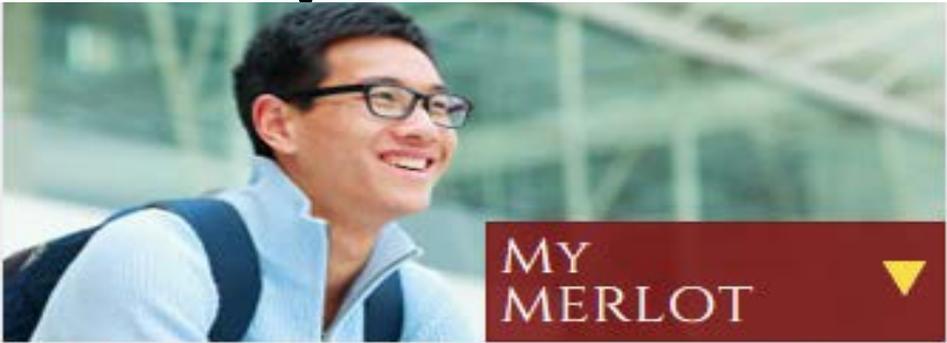
with convenient & affordable access to
content through technologies

Leveraging Content Providers

All free and open educational resources, open
enrollment course (MERLOT, MOOCs, and More)

CREATE CAPABILITIES with Libraries www.merlot.org

SEARCH
MERLOT



MY
MERLOT



MEMBERSHIP



MERLOT



CREATE MATERIALS
WITH CONTENT
BUILDER

Submit to JOLT, the
Journal of Online
Learning and Teaching



NEWS &
INFORMATION

ABOUT
MERLOT



ADD TO

$$x^3 = (u-v)^3 = u^3 - 3u^2v + 3uv^2 - v^3$$
$$x^3 = u^3 - 3u^2v + 3uv^2 - v^3$$

Smart Search Tools Create Capabilities

Search > Material Results

MERLOT Collection **Other Collections** The Web

Sort by: Relevance Sort

Current Search:

MERLOT Collection
Keywords
dna



DNA from the Beginning



[Merge]

DNA from the Beginning is an animated tutorial on DNA, genes and heredity. The science behind each concept is explained using... see more

Material Type: Simulation
Author: Cold Spring Harbor Laboratory
Date Added: Apr 11, 2000 **Date Modified:** Jul 16, 2017

Already in your Bookmark Collection(s) ▼

Bookmark this material ▼

About this material:

Peer Reviews ★★★★★
User Rating ★★★★★
Discussion (59 Comments)
In (478) Bookmark Collections
In (23) Course ePortfolios
Learning Exercises (11)
Accessibility Info (none)

Bookmark this material ▼

About this material:

Peer Reviews ★★★★★
User Rating ★★★★★
Discussion (4 Comments)
In (11) Bookmark Collections
Course ePortfolios (none)
Learning Exercises (none)
Accessibility Info (none)

Refine Your Search:

- ▼ **Materials**
- Search Other Collections
- ▶ Disciplines
- ▼ Material Types
 - Animation (104)
 - Assessment Tool (8)
 - Assignment (23)
 - Case Study (9)
 - Collection (26)

DNA Structure

[Merge]

A 3-dimensional, interactive, animated nonlinear tutorial on the structure of DNA. The user can choose among several views... see more

Material Type: Tutorial
Author: Eric Martz
Date Added: Mar 06, 2000 **Date Modified:** Jun 17, 2017

Search Many OER Collections Conveniently

Search > Other Collections Search Results

MERLOT Collection **Other Collections** The Web

All Other Collections

ComPADRE

Flickr

Google Books

IEEE Computer Society

MIT OCW

NSDL

OER Commons

OpenEd

OpenStax

Scribd

SkillsCommons

Slideshare

The Orange Grove

Wisc Online

Materials 1 - 10 shown of 100 results

Recombinant DNA | Fundamentals of Biology | Biology | MIT ...

Bookmark this material ▼

This unit will cover some basic recombinant **DNA** technologies, why they were developed, and how they are used today in many different scientific arenas.



Applications of recombinant dna technology in pharmacy

Bookmark this material ▼

Oct 15, 2016 ... **DNA** is a very large molecule, Recombinant **DNA** technology procedures by which **DNA** from different species can be isolated, cut In the ...



RECOMBINANT DNA TECHNOLOGY FOR MEDICAL STUDENTS

Bookmark this material ▼

Feb 7, 2017 ... A DETAILED EXPLANATION OF RECOMBINANT **DNA** TECHNOLOGY IS PROVIDED FOR BETTER UNDERSTANDING.



Shaped by the PROFILE of the MERLOT User

Search > The Web Search Results

 **MERLOT Collection**

 **Other Collections**

 **The Web**

Current Search:

The Web
Keywords
dna



Materials 1 - 10 shown of 100 results

[DNA Learning Center](#)

DNA, genetics, and biotechnology online resources and hands-on educational programs for students, educators, and the public.

 [Bookmark this material](#) ▼

[DNA Resource Center](#)

The goal of the DNA Resource Center of the National Center for Victims of Crime is to ensure victim service and allied professionals have accurate and ...

 [Bookmark this material](#) ▼

[Hands-On Programs :: DNA Learning Center](#)

Middle- and high-school teachers can schedule field trips to the DNALC, DNALC West, or Harlem DNA Lab. School districts that frequently take advantage of the ...

 [Bookmark this material](#) ▼

Refine Your Search:

All The Web

Academic Support Services

Arts

Business

Education

Humanities

Mathematics and Statistics

Science and Technology

CONVENIENT CHOICES: Open eTextbooks Aligned with Courses



COOL4Ed

California
Open Online
Library for
Education



HOME **FIND** FACULTY SHOWCASE **COURSE SHOWCASE** SHARE RFP COMMUNITY

- FREE and OPEN eTextbooks**
- FREE and OPEN Course Materials
- FREE and OPEN Online Courses
- FREE and OPEN Access Journals and Articles
- Colleagues In Your Discipline

elcome to COOL 4 ED!



SHOWCASES



21

RFP

Computer Science Programming Concepts and Methodology



COMP 122
General
Course
Description

eTextbook

How to Think Like a Computer Scientist: Learning with Python 3

Introduction to Computer Science

Programming Languages: Application and Interpretation

Structure and Interpretation of Computer Programs

Evaluations of eTextbooks

Quality Evaluations:
Dan Frost, UC Faculty
Garrett Whelan, CCC Faculty
Fay Zhong, CSU Faculty

Accessibility Evaluations

Quality Evaluations:
Dan Frost, UC Faculty
Garrett Whelan, CCC Faculty
Fay Zhong, CSU Faculty

Accessibility Evaluations

Quality Evaluations:
Dan Frost, UC Faculty
Garrett Whelan, CCC Faculty
Fay Zhong, CSU Faculty

Accessibility Evaluations

Welcome to COOL 4 ED!



FIND

Looking for **FREE** and **OPEN** online materials for your courses?

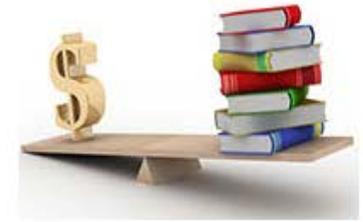
- **FREE** and **OPEN** eTextbooks
- **FREE** and **OPEN** Course Materials
- **FREE** and **OPEN** Online Courses
- **FREE** and **OPEN** Access Journals & Articles



SHOWCASES

Looking to **LEARN** how your colleagues are using **FREE** and **OPEN** eTextbooks?

Looking for courses that have recommended **FREE** and **OPEN** eTextbooks selected for them?



RFP

Looking for information about the California Textbook Affordability Act of 2015 (AB 798) and the California state funding to support the adoption of free and open educational resources by CCC and CSU faculty?



ACCESSIBILITY

Looking for accessibility evaluation methods for digital textbooks? Explore the resources and tools for accessibility evaluation.



OER RESOURCES

Browse the collection of OER resources for ideas and helpful resources when planning and designing your workshops, flyers, etc.



COMMUNITY

Connect with the Affordable College Textbook coordinators, view the webinar schedules, and note announcements.



Clifford A. Shaffer



Course Description:

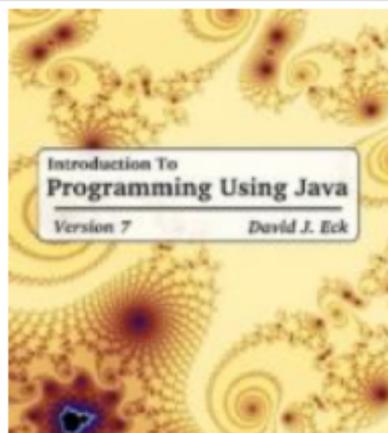
More advanced and detailed treatment of concepts of data or trees, graphs and storage allocation and collection. Application symbol tables, string search, and optimization.

Quote

"The main motivation for adopting the open textbook was to provide access to the material online from anywhere using an

[Learn How I Use This Open Textbook in My Course](#)

More Introduction to
Data Structures Free and
Open eTextbooks



Course Description:

This is an advanced Java programming course. Through extensive exercises and projects, students are expected to have a much about major aspects of object-oriented programming and significant programming and problem solving ability.

Quote

"After overall comparison, I decided to adopt this open textbook to access in various forms and will save our students a lot of

SKILLS COMMONS

Your **FREE** and **OPEN** digital library of Workforce Training Materials
Preparing the Workforce for 21st Century Employment through [TAACCCT](#)



Browse by [industry](#), [credentials](#), & [material type](#)



View Showcases

Project outcomes, course



Get Connected

Announcements, SkillsCommons communities and events,



Contribute Materials

Upload TAACCCT educational resources either [individually](#) or in



Support Center

Get help uploading, planning, and implementing strategies for

- U.S. Dept of Labor invested **\$2 Billion** in community colleges to create OER for workforce development.
- **Open courseware for almost 700 fully online courses in career and technical training** – Advanced Manufacturing, Information Technology, Healthcare, Energy, Construction, and more
- **READY TO DOWNLOAD, REUSE, and REVISE for Thai MOOCs**

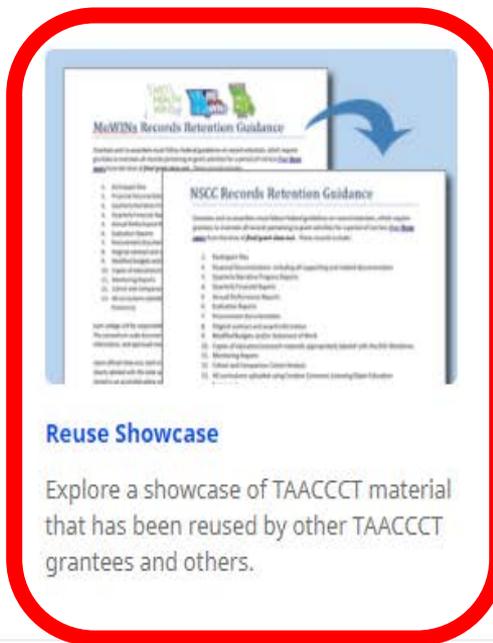
Showcases

Home > Showcases



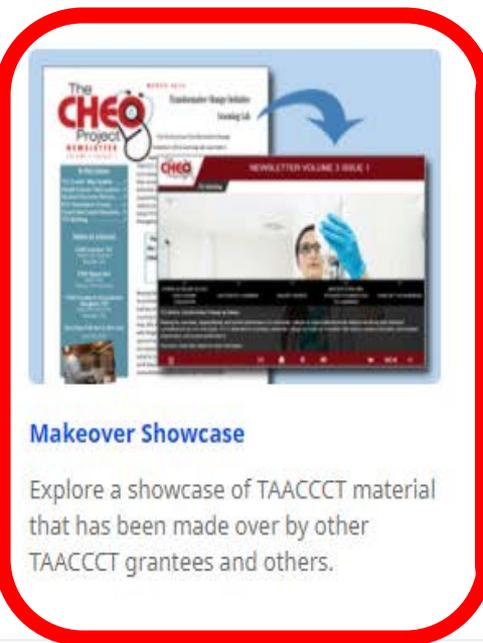
Grant Project Showcase

Explore selected TAACCCT grant projects by Industry that have significant contributions in SkillsCommons.



Reuse Showcase

Explore a showcase of TAACCCT material that has been reused by other TAACCCT grantees and others.



Makeover Showcase

Explore a showcase of TAACCCT material that has been made over by other TAACCCT grantees and others.



Open CourseWare Showcase

Explore selected Collections of Open CourseWare Showcases submitted by TAACCCT grantees.



Project Outcomes Showcase

Explore the outcomes produced by the TAACCCT grant projects and review the



Campus Presidents' Showcase

In this podcast series, community college presidents discuss the impact

CONVENIENT ADOPTION & ADAPTATION

What Is Open CourseWare?

Open CourseWare are collections of fully online learning materials organized in the scope and sequence of a college course. The online course materials are free and open for anyone to use and the learner can use the open courseware to acquire skills and knowledge at their own pace and on their own time. There is no instructor for open courseware.



Business, Management and
Human Resources



Developmental Education
Open CourseWare



Energy Industry Training
Open CourseWare



Healthcare Training
Open CourseWare



Information Technology Training
Open CourseWare



Instructor/Teacher Training
Open CourseWare

Vital Signs eLearning Simulation



This simulation is designed to enhance and illustrate vital signs for healthcare students who have received initial

[Preview Online Simulation: Vital Signs Simulation](#)

[View & Download Materials: Vital Signs Simulation](#)

[Subject Matter Expert Review: SME Reviews: Vital Signs Simulation](#) ?

[Program Guide: Program Guide for Vital Signs Simulation](#) ?

Basic First Aid eLearning Simulation



This simulation is designed to enhance and illustrate basic first aid for healthcare students who have received initial instruction or information on this topic. This is accomplished through nine illustrated simulations that show individuals needing basic first aid. Students are asked to respond to each simulation to determine their knowledge of basic first aid guidelines and processes.

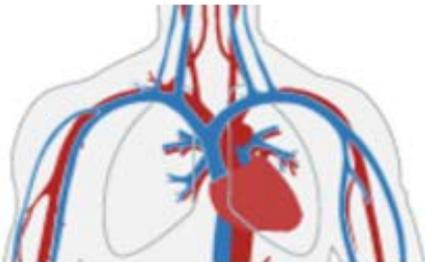
[Preview Online Simulation: Basic First Aid Simulation](#)

[View & Download Materials: Basic First Aid Simulation](#)

[Subject Matter Expert Review: SME Reviews: Basic First Aid Simulation](#) ?

[Program Guide: Program Guide for Basic First Aid Simulation](#) ?

Physical Assessment eLearning Simulation



This simulation is designed to enhance and illustrate basic physical assessment for healthcare students who have received initial instruction or information on this topic. Seven simulations, each focused on a different body system, present basic physical assessment situations. Students are asked to respond in order to determine their knowledge and skill. A quick overview of each of the seven body systems is presented followed by case studies.

[Preview Online Simulation: Physical Assessment Simulation](#)

[View & Download Materials: Physical Assessment Simulation](#)

[Subject Matter Expert Review: SME Reviews: Physical Assessment Simulation](#) ?

[Program Guide: Program Guide for Physical Assessment Simulation](#) ?

Therapeutic Communications eLearning Simulation

Autonomous Robots



Autonomous Robots is a lab-based course that introduces the basic concepts of robotics, focusing on the construction and programming of autonomous mobile robots. This course consists of 15 lessons along with corresponding labs and class activities. Topics covered include the basic principles of mechanical robot construction, electronics, sensors, motor and robot programming; troubleshooting techniques and strategies to identify, localize, and correct malfunctions; and safety and systematic preventative maintenance. In addition, students will work in groups to build and test increasingly more complex mobile robots.

Preview Online Course: [Autonomous Robots](#)

View & Download Materials: [Autonomous Robots](#)

Engineering CAD & Drafting

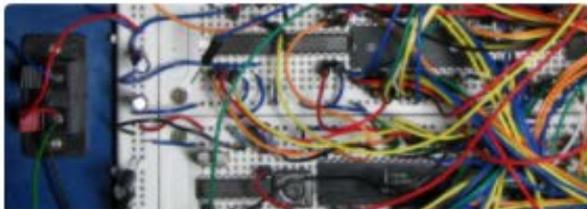


Engineering CAD and Drafting is a survey course that covers CAD modeling and drafting techniques specific to mechatronic systems. This course consists of 15 lessons along with corresponding labs and/or class activities. Topics covered include sketching techniques, multi-view drawings, dimensioning, solid-modeling techniques, documentation drawings, file management, drawing standards, and assemblies. The course embeds preparation for the SolidWorks Associate (CSWA) exam, and culminates in a mechatronic-specific CAD project.

Preview Online Course: [Engineering CAD and Drafting](#)

View & Download Materials: [Engineering CAD and Drafting](#)

Electrical Systems



Electrical Systems is a study of the basic electrical components in a complex mechatronics system. This course discusses basic functions, physical properties, and roles of electrical components and systems, such as transformers, electric circuits, and AC and DC motors; troubleshooting techniques, such as strategies to identify, localize, and correct malfunctions; systematic preventative maintenance; and electrical and mechanical component safety.

Preview Online Course: [Electrical Systems](#)

View & Download Materials: [Electrical Systems](#)

Industrial Robots



Industrial Robots is a study of the working of mechanical manipulators in a safe manner and the uses of industrial robots in manufacturing. This course consists of 15 lessons along with corresponding labs and/or class activities. Topics covered include robotic nomenclature, classifications, applications, input/output sensor interfacing, and work cell design; different methods for programming an industrial robot using manufacturer software and for computing the spatial positions, orientation, and frames of a robot manipulator design; troubleshooting techniques and strategies to identify, localize, and correct malfunctions; and safety and systematic preventative maintenance.

EXPLORE!



DOWNLOAD!

Why Haven't OER Innovations Gone VIRAL?

**Implementation
Strategy
For
OER**

**Enabling
Ecosystems**

with policies, leadership,
business models

Developing Demand

with communications, training,
professional development

Creating Capabilities

with convenient & affordable access to
content through technologies

Leveraging Content Providers

All free and open educational resources, open
enrollment course (MERLOT, MOOCs, and More)

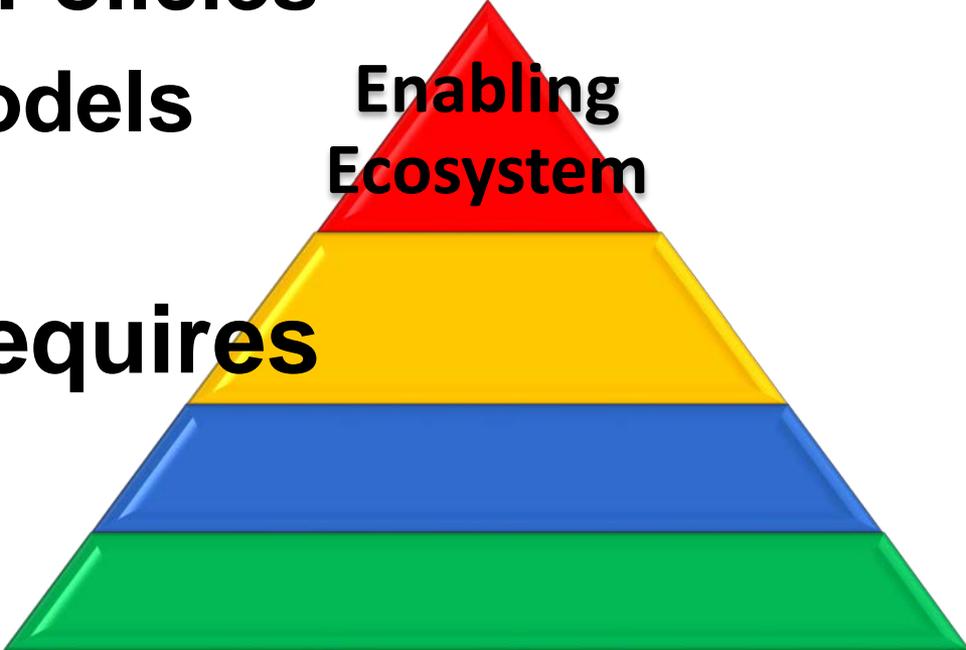
How do you get people to want something like free educational resources 24 X 7?

- **YOU** are the innovation required and your friendship with people will be the critical ingredient for putting educational innovations into practice.
- **YOU** become the innovators explaining the ideas and the benefits of education and OER to those who haven't had the opportunity to learn.

■ **Enabling Ecosystem**

- **Local Leadership**
- **Local Priorities and Needs**
- **Local Culture and Policies**
- **Local Business Models**

- ## ■ **Implementation Requires More Innovators**



**Enabling
Ecosystem**

YOU need to open the doors of opportunity for all by being a trusted friend to invite people to develop their talents through education.

**Implement Innovations Through
Friendships**

Why Friendship?

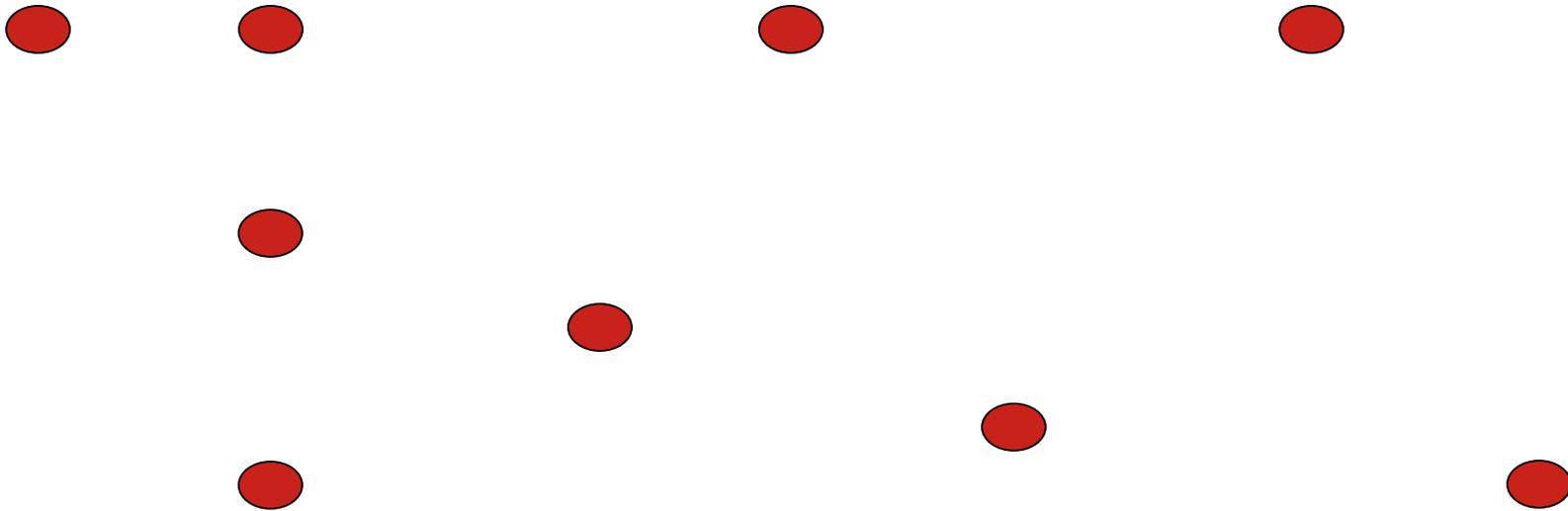
- **Friends** – You do things with friends that you don't normally do – you do innovative things!
- **Friends** – You get social support when life is difficult, challenging, and/or frightening – you do innovative things!
- **Friends** – You share the good times and opportunities with others.

Friends understand the complex situations and the hidden nature of people's talents.

You will be the required ingredient to successfully implement innovation- to be a friend of learners who trust you on their journey to discover and develop their talents.

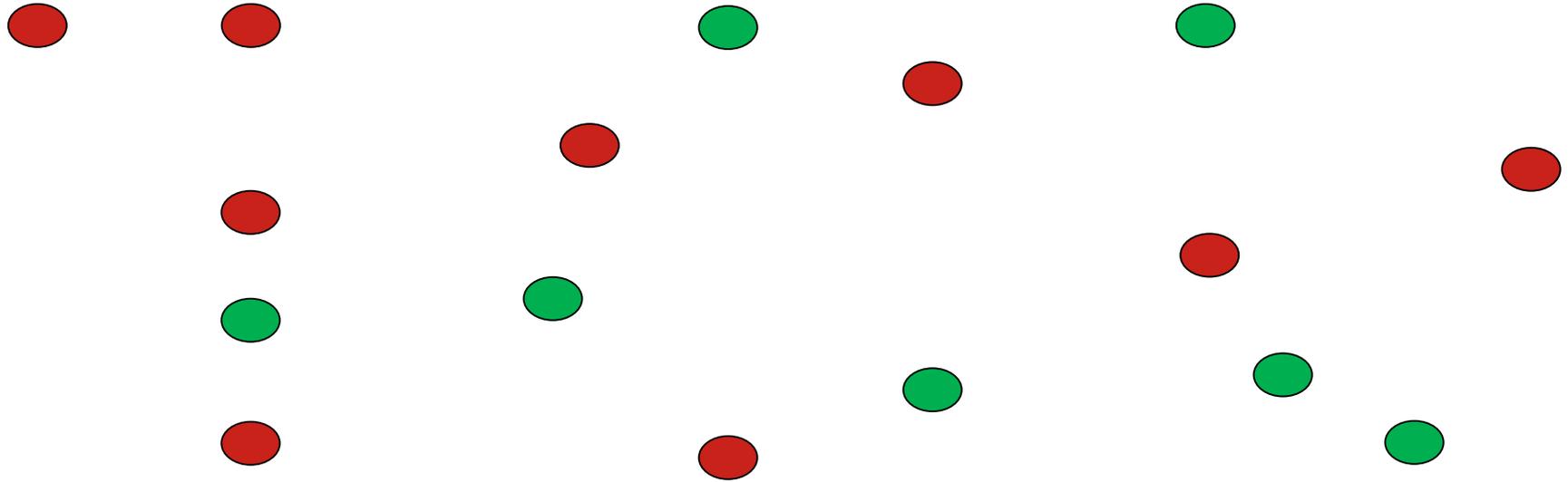
**Give a Gift
And
Not a Burden**

**How do we
“connect the dots”
of opportunity with
people’s talents?**

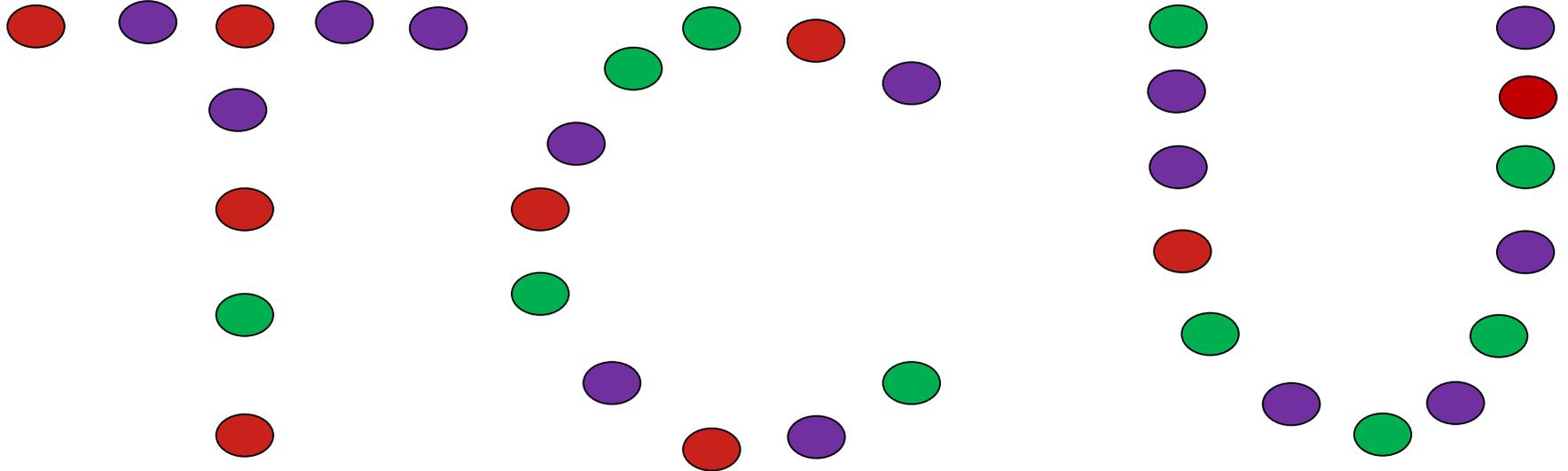


**The world provides some dots of
opportunity...**

Can you tell what it means?



**Free educational resources
through MERLOT &
SkillsCommons can provide
more opportunities but ...**

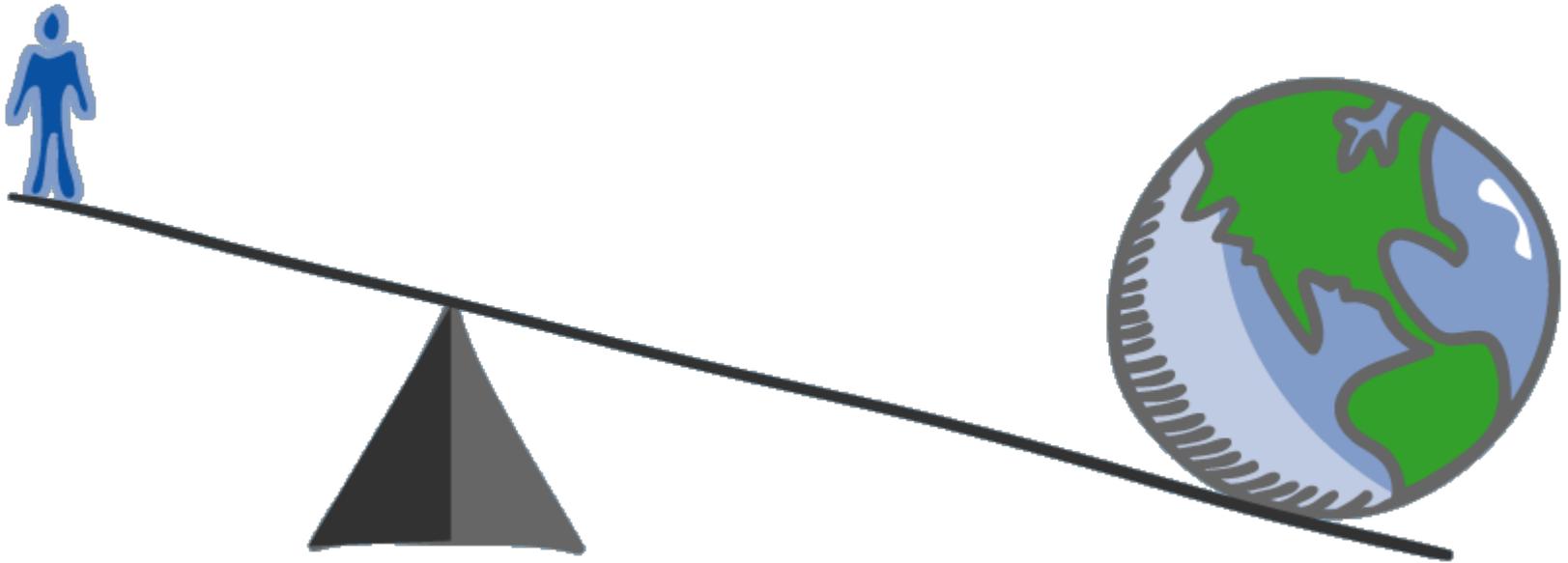


Your Friendships connect the dots so ALL can develop their talents through TCU.

Want to Give a Gift of OER to Others?

- **Hands-On Workshop Friday
afternoon**
 - **Learn to find OER through MERLOT
and SkillsCommons**
- **Make friends, taste MERLOT
(virtually), and take them on an
educational picnic!**

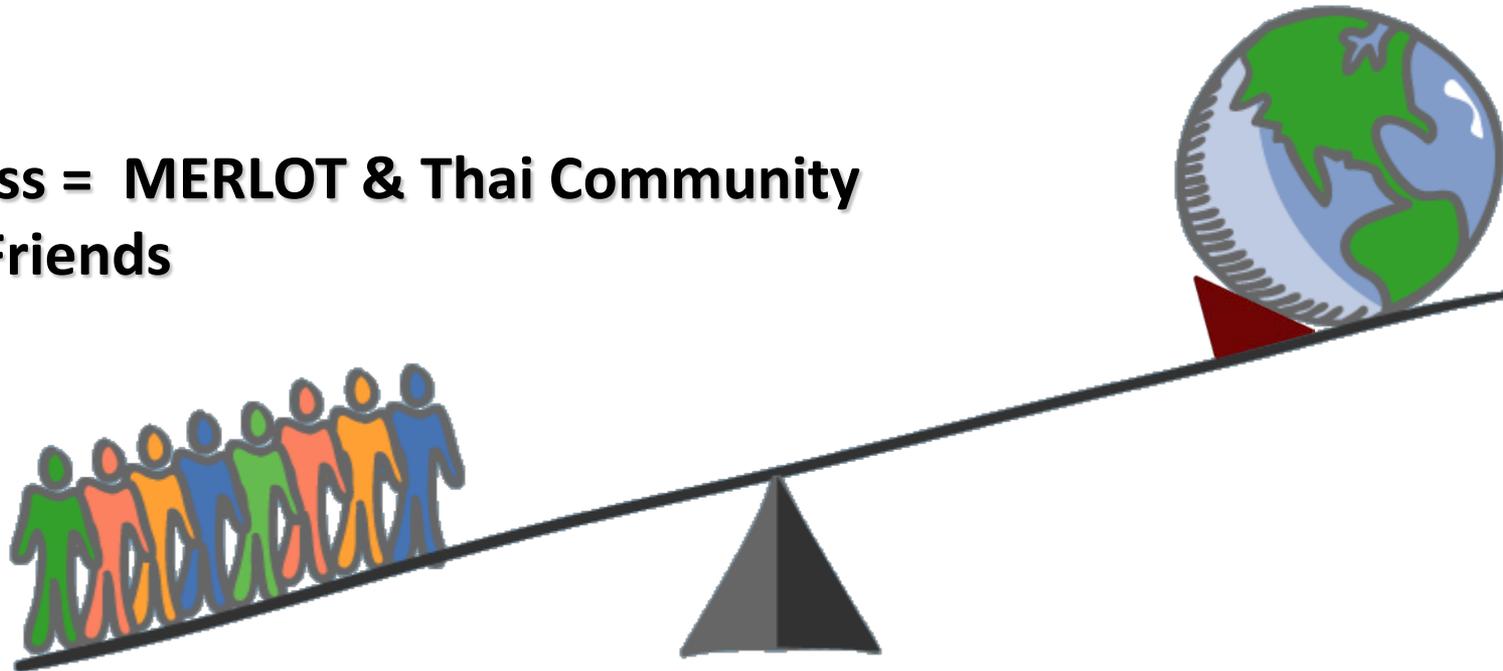
Shall We Make Education MORE Successful?



And Move the World With MORE Innovations Together?

Mass = Educational Innovations

Mass = MERLOT & Thai Community
of Friends



THANK YOU

Questions?