Technology Enhancement for Interactive Online Learning

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Technology won't replace teachers...

...but teachers who use technology will probably replace teachers who do not.
Technology Acceptance Model

Perceived Usefulness

Perceived Ease of Use

Attitude toward particular system use

Intention to use

personal beliefs (variables) influencing a particular system/technology use

21st Century Learning

Students live in a world with anytime, anywhere access to information at their fingertips.
A “device” is defined as a privately owned laptop, tablet computing device, netbook, notebook, e-Reader, iPod Touch, iPad, or smartphone.
Evidences from Previous Technology-based Learning Studies in seven SSCI journals in 2010-2020

Searching in Web of Science Database

• **Selected SSCI journals**
  - Computers & Education
  - Journal of Computer Assisted Learning
  - British Journal of Educational Technology
  - Interactive Learning Environments
  - Educational Technology Research & Development
  - Educational Technology & Society
  - Innovations in Education and Teaching International
Evidences

• Technology-based learning is helpful to students in improving their learning performance (i.e., learning achievement, skills).
• Technology-based learning is helpful to students in promoting their learning attitudes, motivations, and interest.
• Technology-based learning is helpful to students in increasing their self-directed learning ability and self-efficacy.
• Technology-based learning is helpful to promote students to learn in self-regulated learning and flipped classrooms.
• Teacher’s belief and ability in technology is very important for successful classrooms.
Technological Pedagogical Content Knowledge (TPACK) - Underlying truly meaningful and deeply skilled teaching with technology.

Technology Knowledge (TK) – Knowledge about certain ways of thinking about, and working with technology, tools and resources, and working with technology can apply to all technology tools and resources.

Technological Content Knowledge (TCK) – An understanding of the manner in which technology and content influence and constrain one another.

Technological Pedagogical Knowledge (TPK) – An understanding of how teaching and learning can change when particular technologies are used in particular ways.

Content Knowledge (CK) – Teachers’ knowledge about the subject matter to be learned or taught.

Pedagogical Knowledge (PK) – Teachers’ deep knowledge about the processes and practices or methods of teaching and learning.

Pedagogical Content Knowledge (PCK) – Knowledge of pedagogy that is applicable to the teaching of specific content.

Available at http://matchsz.inf.elte.hu/CIEL/TPACK.html

Reproduced by permission of the publisher © 2012 by tpack.org
The way to combine the best teaching method in a particular content
The combination of live, interactive, face-to-face instruction along with DIGITAL CONTENTS
DIGITAL CONTENT can be more flexible and dynamic than traditional textbooks.
The ability to watch instruction multiple times, stop, pause, and rewind is beneficial for many students.
Computer Simulation

https://phet.colorado.edu/
Computer Simulation

• To explore unobservable phenomena;
• To link the observable and unobservable phenomena;
• To point out salient/relevant information;
• To enable learners to conduct multiple experiments in a short duration of time;
• To provide results of lengthy investigations instantaneously.

(de Jong et al., 2013; Jaakkola et al., 2011; Olympiou and Zacharia, 2012; Zacharia et al., 2012; Zacharia et al., 2008; Zacharias et al., 2008).
Augmented Reality: Element 4D


Bring this set of six beautifully designed wooden blocks to life through augmented reality with the Elements 4D app.
Augmented Reality: Element 4D Marker
Augmented Reality: Element 4D

Video
Augmented Reality: Anatomy 4D
Augmented Reality: Anatomy 4D

Video
Augmented Reality (AR)

- Augmented reality (AR) refers to technologies that dynamically blend real-world environments and context-based digital information.
- Recent advances in mobile technologies (i.e., smartphones and tablets with built-in cameras, GPS and internet access) made AR applications available for educational systems.
- Mobile AR applications leverage learning and allow both teachers and students to interact with the combined environment of real-and virtual world for getting better understanding of natural phenomena.

(Sommerauer & Muller, 2014)
The relationships among ubiquitous learning, mobile learning, and context-aware ubiquitous learning

Challenges for using pedagogies with the ubiquitous learning mode

- Inquiry-based learning
- Collaborative learning
- Discovery learning
- Formative assessment
- Flipped classroom

Ubiquitous learning
Digital game with lecture-based learning

- C computer programing language course
- Digital game-transformed lecture-based approach
- Better programming conceptions and skills by comparing it to classroom in the usual university setting

Mobile Game-Transformed Lecture-Based Approach (MGL)

- Pre-gaming
  - Teacher
  - Students
  - Learning theory of C programming language

- Gaming
  - Student
  - Exploring examples of C programming language by playing the mobile game

- Postgaming
  - Student
  - Doing C programming language assignments

Digital game with lecture-based learning

- Clinical chemistry course on the internal quality control topic
- Digital game-transformed lecture-based approach
- Trigger knowledge acquisition and enable students to analyze internal quality control data, leading to less anxiety for performing clinical chemistry assessments

Lecture-based mobile-gaming group (In-class then out-of-class learning)
- Learning by lecture-based then play “Clinic Chemistry” via mobile device at out-of-class for two months period.

Mobile-gaming group (Learning without classroom attended)
- Play “Clinic Chemistry” via mobile device at anyplace anytime for two months period
- Learning materials had been provided.

Inquiry-based Learning Approach

• Inquiry based learning approach is a method that **students are provided opportunity to carry out investigation to test their ideas** and construct their own knowledge, making inquiries through experiment.

• When engaging in inquiry, **student describes** objects and events, asks questions, **constructs explanations, test the explanations** against current scientific knowledge, and **shares ideas** with others.

• The students are asked to identify their assumptions, use critical and logical thinking, and consider attractive explanations.

• In this way, they **actively develop their understanding** of science by combining scientific knowledge with reasoning and thinking skill.

(Buck, Stacey, & Marcy, 2008)
Levels of inquiry-based learning

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Level 0: Confirmation</th>
<th>Level ½: Structured inquiry</th>
<th>Level 1: Guided inquiry</th>
<th>Level 2: Open inquiry</th>
<th>Level 3: Authentic inquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem/Question</td>
<td>Provided</td>
<td>Provided</td>
<td>Provided</td>
<td>Provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Theory/Background</td>
<td>Provided</td>
<td>Provided</td>
<td>Provided</td>
<td>Provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Procedures/Design</td>
<td>Provided</td>
<td>Provided</td>
<td>Provided</td>
<td>Not provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Results analysis</td>
<td>Provided</td>
<td>Provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Results communication</td>
<td>Provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Conclusions</td>
<td>Provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Not provided</td>
</tr>
</tbody>
</table>

More structure

Less structure

An Example of Ubiquitous Learning with Inquiry-based learning approach in Higher Education

- Computer Programming Course
- Inquiry-based learning approach with the support of a ubiquitous learning support system
- Better learning achievement and code comprehension by comparing it to computer programming classroom in the usual university setting
Use inquiry question to trigger exploration of phenomena in relation to the topic

Display basic and necessary knowledge, and all required information in relation to the topic

Perform experimental procedures that students explore phenomena in relation to the topic

Identify how collected or noted information/data are interpreted and analyzed by proper method

Present or communicate analyzed data and experimental results regarding a specific method for analyzing collected data

Point out a summary or list of explorations and results that should have been obtained in relation to the topic

Conclusions

Procedure/Design

Result Analysis

Result Communication

Theory/Background
Mastery Learning Approach

• Mastery learning approach requires students to be master on certain objectives before learning further.
• Students are assessed gradually in such process while repeated learning may be required.
• Students make corrections in their learning to meet the criteria set throughout their learning experiences by acquiring a foundation of appropriate knowledge for mastering the relevant concepts
• Mastery learning approach has been adopted in adjusting the ongoing approach by monitoring students’ learning status and providing corresponding learning activities accordingly.

(Bloom 1971; Federico, 2000; Felder & Soloman, 2000; Furtak 2012; Guskey 2007; Wang et al., 2006)
Formative Assessment: Assessment for learning

- A process that provides feedback and support during instruction
- Teachers and students can adjust ongoing instruction and learning to improve students’ achievement of planned instructional outcomes
- Students can assess their own progress and understanding
- Questioning is considered to be an effective formative assessment
  - It can capture students’ actual learning understandings and misconceptions
  - It is helpful for teacher in order to provide feedback to students for adjust their learning at the appropriate time.

(Cauley & McMillan, 2010; Seale, Chapman, & Davey, 2000)
Digital citizenship computer game with a contextual decision-making-oriented approach

Welcome Digital Citizenship Game

The game will be about 4 questions. Each question will be the next question.

Video
Example of Decision Tree for Digital Citizenship context

Gaming Scenario (1)
Cyberbullying: Be Upstanding

Decision to be made (1-1)
Kevin sends his friend José a short video he made at home, a reenactment of a famous fantasy movie scene. José, laughing at how Kevin looks, José decides to show it to some other boys at school.

Decision (1-1 A)
José doesn’t show the video to some other boys at school.

Result (1-1 A)
Kevin's happiness level increased. (Show happy face)
Add a photo of José to Upstander.

(Quiz 1)
Take a Quiz of knowledge

Decision (1-1 B)
José shows the video to some other boys at school.

Result (1-1 B)
Kevin's happiness level decreases. (Show sad face)
Kevin doesn’t have an upstander.

Decision to be made (1-2)
The boys laugh at Kevin. José and his friend decided to post it on a video-sharing website, without Kevin’s permission.

Decision (1-2 A)
José and his friend don’t post it on a video-sharing website.

Result (1-2 A)
Kevin’s happiness level increased. (Show happy face)
Add a photo of José and his friend to Upstander.

Decision (1-2 B)
José and his friend post it on a video-sharing website.

Result (1-2 B)
Kevin’s happiness level decreases. (Show sad face)
Kevin doesn’t have an upstander.

Decision to be made (1-4)

Millions of people then view Kevin’s video. Nasty comments are posted. Every day, Kevin goes online to check the site and sees more comments like “idiot” and “fat nerd.” Every day, he goes to school and hears similar cruel comments from his classmates.

Example of Decision Tree for Health Education

Gaming scenario (2): After the surgery

Decision to be made (2-1):
Peter found that he frequently had "diarrhea" after the surgery. He decided to do something for it.

- **Decision 2-1A:** Eat fluid food or soft food
  - Result 2-1A: The degrees of Personal life-force and family happiness are increase.
  - Decision 2-2A: Wait for the next available time since more than 6 hours pass from 6:00AM.
    - Less negative effects on his health.
    - Go to Gaming scenario (3)

- **Decision 2-1B:** Eat food that stimulates stomach and intestines peristalsis
  - Result 2-1B: The symptom is not improved. The degree of life-force is decreased.
    - Decision 2-2B: Have the medicine immediately.
    - Serious negative effect on his health. The degree of Life-force is significantly decreased.
    - Decision 2-3: Peter needs to decide what to do next.
      - Go to Gaming scenario (3)
      - Restart Gaming scenario (2-2) to fix the problem.

- **Decision 2-1C:** Drink more soybean milk
  - Result 2-1C: Keep trying to deal with the symptom
    - Decision 2-2C: Ignore it
      - Decision 2-4: After the lunch, Peter found that he forgot to take the medicine on time. He should have taken the medicine at 6:00AM, but it is 2:00PM. What should he do?
        - Decision 2-2A: Have the medicine immediately.
        - Serious negative effect on his health. The degree of Life-force is significantly decreased.
        - Decision 2-2A: Go to Gaming scenario (3)
        - Less negative effects on his health.
        - Restart Gaming scenario (2-2) to fix the problem.
        - Go to Gaming scenario (3) with low Life-force

Fig. 2. Illustrative example of the storyline tree.
Educational objectives of in- and out-of-class activities for flipped learning

Focus of in-class learning space

Focus of out-of-class learning space
Flipped Classroom with inquiry learning and KM

- Web-programing language course
- Integrating inquiry learning and knowledge management approach into a flipped classroom
- Better programming skills, code comprehension, positive perceptions by comparing it to classroom in the usual university setting

NEW NORMAL
Learning in Post-COVID19
Meaningful interactions in Community of Inquiry framework for NEW NORMAL Learning: *Online Live*

(Garrison, Anderson, & Archer, 2000)
Tips & Techniques from Old Normal to NEW NORMAL Learning

➢ Mobile game-transformed lecture to Digital material-transformed Online Live

➢ Inquiry-based flipped classroom to Online inquiry-based flipped classroom

➢ Personalized flipped classroom to Online personalized self-regulated flipped classroom
Mobile game-transformed lecture to Digital material-transformed Online Live

Expected Learning Outcomes:
- Learning achievement
- Particular skill
- Learning motivations: intrinsic motivation, career motivation, self-determination, self-efficacy

Inquiry-based flipped classroom to Online inquiry-based flipped classroom

Pre-week
Introduce content by online live with WebEx, Zoom, Google Meet, etc.

1. Open-ended question or inquiry task
- online live with WebEx, Zoom, Google Meet, etc.
- email question or task
- post on social media for course

2. Basic information
- online live
- email
- Social media

3. Individual exploration
- Individual coding exploration

4. Socialization
- online live: share or chat
- social media

5. Externalization
- online live: discussion

6. Combination
- online live: exchange, combine knowledge with other sources via chat

Expected Learning Outcomes:
- Learning achievement
- Particular skill
- Learning perceptions: usefulness, ease of use, attitude, intention to use

Self-regulated learning strategy

- **Forethought phase:**
  - analyze the learning tasks and set specific learning goals and strategies to achieve these goals

- **Performance phase:**
  - implement learning based on students’ learning strategies to try best to achieve learning goals
  - monitor the appropriate learning to certain learning goals
  - adjust learning strategies for achieving learning goals

- **Self-reflection/Evaluation phase:**
  - evaluate the correlations between learning results and learning strategies in order to determine the effectiveness of the learning strategies
  - adjust learning strategies for achieving learning goals

- High self-regulated learning, high self-confidence, high learning performance

Activity Preparation

Email Address Acquisition

Click here >>> t.ly/1bYw
Asynchronous & Synchronous

Diagnostic Test

Asynchronous

1. Providing corresponding learning material: PowerPoint, video-based lecture, etc.
   - Students perform self-learning in an online learning environment
   - Teacher gives comments and feedback
   - Self-regulation: goal setting out-of-class learning

Synchronous

2. Teacher clarifies students' misunderstandings according to the self-learning activities
3. Clarifying misunderstanding: online live

Discussing and concluding knowledge
Asynchronous: Tips to create video lecture

- Short videos
- Cognitive load
- Flow
- Dual-coded content
- Scaffolding
- Call to action
Hi, welcome to this course where we'll try to improve your statistical inferences. My name is Daniel Lakens, I'm an experimental psychologist working at the Human-Technology Interaction group at Eindhoven University of Technology. Now, some years after I completed my Ph.D., I realized that my understanding of statistics was actually not good enough to design a proper study. I joined the Reproducibility Project which has the goal to reproduce 100 studies in psychology. And when I started to perform the replication study that I would do, I realized that I had to calculate an effect size to perform an a priori power analysis. Now, this is a very basic first step when you design a new study, whether it's a completely new study or a replication study, it doesn't matter.
Cognitive Load
<table>
<thead>
<tr>
<th>1</th>
<th>Good design, Good function, Good Quality with Low price.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black box</td>
</tr>
<tr>
<td>3</td>
<td>Problem-solving process</td>
</tr>
<tr>
<td>4</td>
<td>Emotion Talk</td>
</tr>
<tr>
<td>5</td>
<td>26 mins</td>
</tr>
</tbody>
</table>
Flow

Simple -to- Complex
Known -to- Unknown
Knowledge -to- Application

1

2

3

4

5

Let's Check out someone's “Emotions”

"If I had asked people what they wanted, they would have said faster horses."
Dual-coded Content

"Question Ladder"

<table>
<thead>
<tr>
<th></th>
<th>Did</th>
<th>Is</th>
<th>Can</th>
<th>Will</th>
<th>Would</th>
<th>Might</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>Who did</td>
<td>Who is</td>
<td>Who can</td>
<td>Who will</td>
<td>Who would</td>
<td>Who might</td>
</tr>
<tr>
<td>What</td>
<td>What did</td>
<td>What is</td>
<td>What can</td>
<td>What will</td>
<td>What would</td>
<td>What might</td>
</tr>
<tr>
<td>Where</td>
<td>Where did</td>
<td>Where is</td>
<td>Where can</td>
<td>Where will</td>
<td>Where would</td>
<td>Where might</td>
</tr>
<tr>
<td>When</td>
<td>When did</td>
<td>When is</td>
<td>When can</td>
<td>When will</td>
<td>When would</td>
<td>When might</td>
</tr>
<tr>
<td>Why</td>
<td>Why did</td>
<td>Why is</td>
<td>Why can</td>
<td>Why will</td>
<td>Why would</td>
<td>Why might</td>
</tr>
<tr>
<td>How</td>
<td>How did</td>
<td>How is</td>
<td>How can</td>
<td>How will</td>
<td>How would</td>
<td>How might</td>
</tr>
</tbody>
</table>
Scaffolding
Asynchronous: Tips to create video lecture

- Short videos
- Cognitive load
- Flow
- Dual-coded content
- Scaffolding
- Call to action
Call to action
Example
สัมภาษณ์เกี่ยวกับ **Axis of emotion**

Q: ข้อมูลที่จะมาเขียนกราฟเป็นข้อมูลเกี่ยวกับอารมณ์หรือความรู้สึก?
A: ต้องใช้ข้อมูลจากการสัมภาษณ์คนregunta สัมภาษณ์คนreguntaที่นี้นับกระยะ

Q: ต้องรวมลักษณะตามข้อมูลที่เกี่ยวข้อง?
A: ต้องรวมลักษณะตามข้อมูลที่เกี่ยวข้อง

Q: สินภาษณ์ถูกแบ่งเป็น 2 คอลัมน์ ถ้าเป็นไปได้ขอให้คุณ...
A: สินภาษณ์ถูกแบ่งเป็น 2 คอลัมน์ ถ้าเป็นไปได้ขอให้คุณ...

ข้อความเกี่ยวกับ **Empathy map canvas**

Q: เขียนข้อมูลลงไปใน Canvas และได้ใช้เวลาในการทำ
A: เขียนข้อมูลใน Canvas ครั้งหนึ่ง ได้เวลา ภายในหนึ่งวัน

Q: ใช้คอลัมน์ 2-3 คอลัมน์ใน Canvas เติมข้อมูล
A: ใช้คอลัมน์ 2-3 คอลัมน์ใน Canvas เติมข้อมูล

Q: ดีที่สุดในเติมสิ่งที่คุณสามารถการสัมภาษณ์ได้
A: ใช้คอลัมน์ 2-3 คอลัมน์ใน Canvas เติมข้อมูล

Q: เขียนข้อมูลจากกราฟว่าจะเกี่ยวกับ_canvas ได้ที่ Canvas
A: เขียนข้อมูลจากกราฟว่าจะเกี่ยวกับ_canvas ได้ที่ Canvas

Q: คงต้องเขียนสิ่งที่คุณสามารถการสัมภาษณ์ได้
A: คงต้องเขียนสิ่งที่คุณสามารถการสัมภาษณ์ได้

Q: คุณต้องเขียนสิ่งที่คุณสามารถการสัมภาษณ์ได้
A: คุณต้องเขียนสิ่งที่คุณสามารถการสัมภาษณ์ได้

หมายเหตุ: ข้อมูลที่เกี่ยวข้องกับ **Assignment**

Q: เป็นงานสัมภาษณ์/
A: เป็นงานสัมภาษณ์/

Q: ข้อมูลที่จะมาเขียนกราฟเป็นข้อมูลเกี่ยวกับอารมณ์หรือความรู้สึก?
A: ข้อมูลที่จะมาเขียนกราฟเป็นข้อมูลเกี่ยวกับอารมณ์หรือความรู้สึก

Q: สินภาษณ์ถูกแบ่งเป็น 2 คอลัมน์ ถ้าเป็นไปได้ขอให้คุณ...
A: สินภาษณ์ถูกแบ่งเป็น 2 คอลัมน์ ถ้าเป็นไปได้ขอให้คุณ...

หมายเหตุ: **56**
Asynchronous & Synchronous with existing tools

Asynchronous:

1. Diagnostic Test

2. Providing corresponding learning material: PowerPoint, video-based lecture, etc.
   - Students perform self-learning in an online learning environment
   - Teacher gives comments and feedback
   - Self-regulation: goal setting

Synchronous:

3. Clarifying misunderstanding: online live

Discussing and concluding knowledge

Google Classroom

Mentimeter

coggle
Google Classroom: Learning Management System

Type in any browser:

classroom.google.com

Log in to a google account to see this page
Google Classroom: Learning Management System

Students' view

Classes
Calendar
To-do
Student Role-ILSE 617 Emerging Technology for Learning

ILSE SYLLABUS
17 Emerging Technology for Learning

23 PM

20), 2(2-0-4) credit hours

ILSE617-Course Syllabus.pdf
PDF

Comments

class comment...
# Google Classroom: Learning Management System

## Students’ view

<table>
<thead>
<tr>
<th>To-do</th>
<th>Assigned</th>
<th>Missing</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>All classes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No due date</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This week</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next week</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Later</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Google Classroom: Learning Management System

Technology Enhancement

Introduce yourself
S S • 7:29 PM
10 points

Provide one paragraph of your bio

Class comments

Your work
IMG_1168.png
Image

Turned in late

Private comments

Add private comment...
Google Classroom: Learning Management System

Instructor’s view:

- Create class
- Class name (required)
- Section
- Subject
- Room

Stream

Fishing and cooking

Class code: siofgyr

Communicate with your class here:
- Create and schedule announcements
- Respond to student posts
Google Classroom: Learning Management System

Instructor’s view

Assign work to your class here
- Create assignments and questions
- Use topics to organize classwork into modules or units
- Order work the way you want students to see it

Points
- 100

Due
- No due date
Google Classroom: Learning Management System

Instructor’s view

For

2 classes

Title

Introduce yourself

Instructions (optional)

Provide one paragraph of your bio

Points

10

Due

No due date
Google Classroom: Learning Management System

Instructor’s view
Google Classroom: Learning Management System

Instructor’s view

1. Introduce yourself
   Due Nov 22
   - Turned in: 1
   - Assigned: 0
   - View assignment
   - 1/10
   - Done later
Google Classroom: Learning Management System

Instructor’s view

8:09
AA  classroom.google.com

Sort by status

Turned in

Nadie Sajipanroj
Done late

8:10
AA  classroom.google.com

Instructions  Student work

Return
10 points

Sort by status

All students

Turned in

Nadie Sajipanroj
8/10

Private comment

Return work to 1 student?
Student will be notified and can check any grade you’ve left.
Google Classroom: Learning Management System

Instructor’s view

Archived classes

Fishing and cooking

Archive Fishing and cooking?

Archiving a class causes it to be archived for all participants.

Archived classes can't be modified by teachers or students unless they are restored.

This class will move to your Archived classes. Class files will remain in Google Drive.
• To invite a co-teacher
  – The main instructor must invite the co-teacher via the system, and the co-teacher must click “JOIN” from the provided link (sent via email).

• To invite a student via email
  – Same rule as the co-teacher

• If the students cannot turn in their assignments,…
  – Check Google storage

• Other Google Classroom Tips and Tricks: [http://tiny.cc/GClassTips](http://tiny.cc/GClassTips)
Mentimeter

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Type

Popular question types

- Multiple Choice
- Word Cloud
- Open Ended
- Scales
- Ranking
- Q&A

Quiz Competition

- Select Answer
- Type Answer

Content slides

- Heading
- Paragraph
- Bullets
<table>
<thead>
<tr>
<th>Mahidol Core Value</th>
<th>เข้าใจ</th>
<th>มีส่วนร่วม</th>
<th>มุ่งมั่น</th>
<th>เป็นอันหนึ่งอันเดียว</th>
<th>Ambassador</th>
</tr>
</thead>
<tbody>
<tr>
<td>M – Mastery</td>
<td>รู้แจ้ง รู้จริง สมเหตุ สมผล</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A – Altruism</td>
<td>มุ่งผลเพื่อผู้อื่น</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H – Harmony</td>
<td>กลมกลืนกับสรรพสิ่ง</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I – Integrity</td>
<td>มั่นคงยิ่งในคุณธรรม</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D – Determination</td>
<td>แน่วแน่ห้า กล้าตัดสินใจ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O – Originality</td>
<td>สร้างสรรค์สิ่งใหม่</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L – Leadership</td>
<td>ไม่ใจเป็นผู้นำ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dimensions

See popular examples

Custom low label

| Strongly disagree | 1 |

See mid-values

Custom high label

| Strongly agree | 5 |

Extras

- Show the total average of all statements
- Let participants skip single statements

1 = เช้าใจ
2 = มีส่วนร่วม
3 = มุ่งมั่น
4 = เป็นอันหนึ่งอันเดียวกัน
5 = Ambassador
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