



Technology Enhanced Teaching

Pedagogical Principles, Technological Designs, and Research Projects

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Social Media Guest Lecture: **Lecture 01**

09-November-2010

Vivorde Kursuscenter, Charlotteslund, Denmark

Course Portal: <http://teach.cbs.dk/>

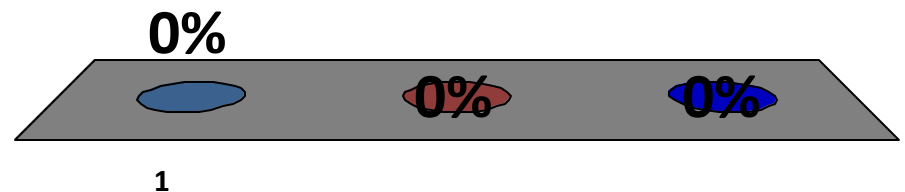
Etherpad: <http://ietherpad.com/qHXnxu0oSC>

Agenda

Time	Topic
20:00--20:10	Teaching: 21 st Century Challenges
20:10--20:20	Principles of Technology enhanced Teaching (TeT)
20:20--20:35	A Teaching Case of Social Media Usage
20:35--20:45	Demonstration of Classroom Response Systems (CRS)
20:45--21:00	Discussion

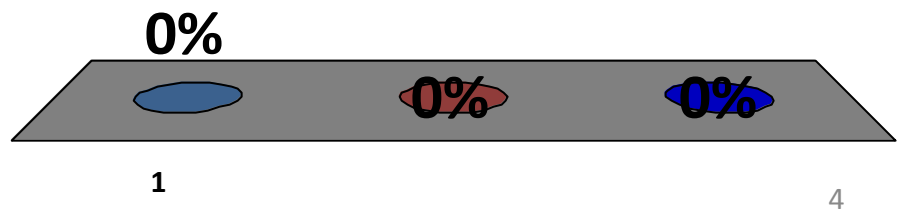
How many of you use youtube videos in your teaching?

1. Yes
2. No
3. What is youtube? ;-)



How many of you use facebook in your teaching?

1. Yes
2. No
3. What is facebook? ;-)



How many of you record lectures?

1. Yes
2. No



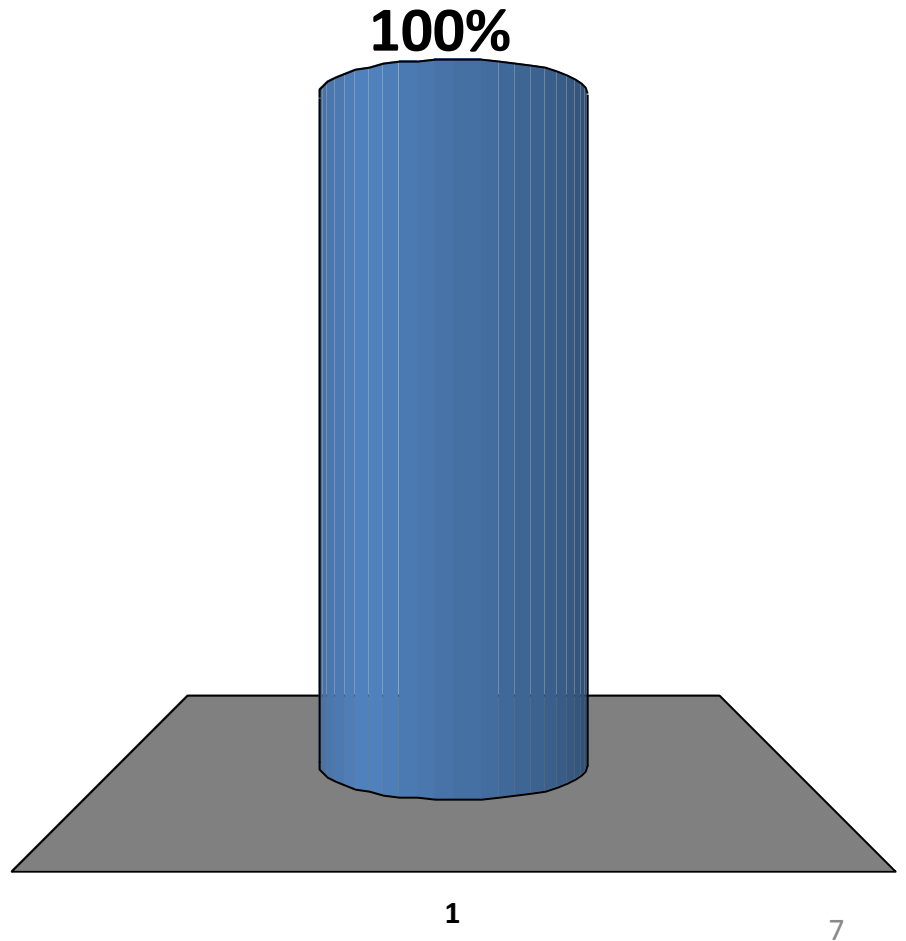
How many of you use collaborative technologies in your teaching?

1. Yes
2. No



Enter question text...

1. Enter answer text...



TEACHING: 21ST CENTURY CHALLENGES

- **Develop 21st Century competencies** in addition to subject-matter specific KSAs
- **Personalize learning:** Plan for the individual student
- **Teach adaptively** in the classroom, making good use of ICT
- **Provide evidence-based accounts** for selected learning activities and assessments
- **Be accountable** towards stakeholders (students, parents, policy makers).

OUTLINE

- Review of Pedagogical Principles
 - Self-Explanation Effect
 - Zone of Proximal Development
 - Scaffolding
 - Triadic Dialogue (IRE/IRF)
- Review of Technology Design Principles
 - Representational Guidance
 - Grounding Constraints
 - Socio-Technical Affordances
 - Technological Intersubjectivity
 - Grounding Constraints
 - Artifact-Centered Discussion

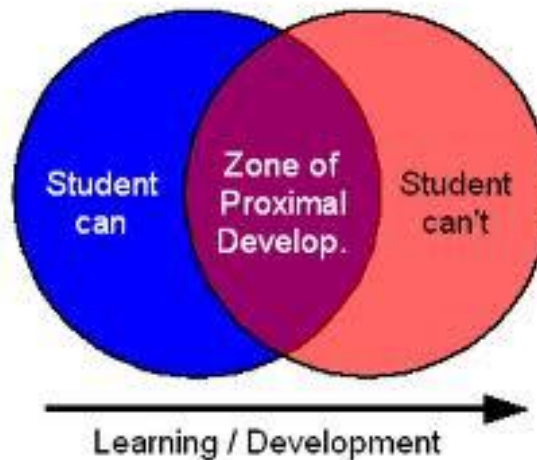
SELF-EXPLANATION EFFECT

- Generating explanations to oneself facilitates integration of new information into existing knowledge
 - Procedural Skills
 - Declarative Knowledge

Zone of Proximal Development

“The **distance between the actual developmental level** as determined by independent problem solving and the **level of potential problem solving** as determined through problem solving under adult guidance or in collaboration with more able peers.” (Vygotsky 1978, p.86)

One Model for the ZPD



http://education.uwsp.edu/381/activities/50_sociocultural/zpd.gif

Scaffolding & Scripting

“...‘scaffolding’ was described by Bruner as a “vicarious consciousness”, a temporary intellectual support which a teacher offers in order to draw the learner up towards a higher level of understanding.”

(Fernandez et al., 2001, p.41)

Triadic Dialogue (IRE/IRF)

- Teacher Initiates
- Student Responds
- Teacher Evaluates/Gives Feedback

Representational Guidance

constraints: limits on expressiveness, and on the sequence in which information can be expressed [33] and

and

salience: how the representation facilitates processing of certain information, possibly at the expense of others

(Suthers, 2001))

Grounding Constraints

Grounding Constraints in Communication

Copresence	A and B share the same physical environment
Visibility	A and B are visible to each other
Audibility	A and B communicate by speaking
Cotemporality	B receives at roughly the same time as A produces
Simultaneity	A and B can send and receive at once and simultaneously
Sequentiality	A's and B's turns cannot get out of sequence
Reviewability	B can review A's messages
Revisability	A can revise message for B

Clark, H. H., & Brennan, S. E. (1991). Grounding in communication. In L. B. Resnick, J. M. Levine & S. D. Teasley (Eds.), *Perspectives on Socially Shared Cognition* (pp. 127-149): American Psychological Association.

Socio-Technical Affordances

Affordances are **action-taking possibilities** and **meaning-making opportunities** in a socio-technical system relative to actor *competencies* and system *capabilities*

Technological Intersubjectivity

Production, projection and performance of identity and subjectivity in technology mediated social interactions

How actors relate to, interact with and form impressions of each other in technology mediated interactional settings

Artifact-Centered Discussion

- To solve the problems of incoherence and divergence

A6 - Suann

Home Back Forward Refresh Help Clear

Materials: [dropdown]

You have received all the reports from your research assistants. You have all the data. To complete this research project, please do the following:

1. Try and work out with your colleague the cause for the disease. Discuss with your colleague who or what is responsible for causing the disease.
2. Discuss and outline with your colleague the recommendation that you would make to the World Health Organization (WHO) to prevent the disease in the future.

Please let the facilitator know when you are finished doing the above.

Add message...

With increased processing for BMAA:

Reply

Re: All Done

List

I think it's more the raw seeds being harmful (BMAA) versus the treated seeds. Flying fox soup was a delicacy in the Chamorro society.

Reply

Title: Re: All Done

Post

Cancel

Unread messages: 0 Unread nodes: 0

Discussion

Hypothesis

These plants are well-known to be highly poisonous and must be carefully processed to remove toxins, before they are edible. If they are not properly processed they can cause vomiting, liver damage and even death. There is also evidence they have neurotoxic effects. To remove the toxins, different methods of processing are used by different cultures.

Data

- Seed of false ring palm used in foodstuffs

- Nutritional in area says, "Crud seeds could cause the Chamorro disease. Everybody knows that the flying fox toxin. The people go to a lot of trouble to process it in order to detoxify it."

- If they are not properly processed they can cause vomiting, liver damage and even death. There is also evidence they have NEUROTOXIC effects.

Discussion

Not yet.

That might ring (Prime form of) it's without any... but I don't know if these things

Hypothesis

Maybe the fruit ITSELF is not toxic, but the OASES it sends from preparation - special cultures are used to make cyrode EVIDENCE - may require SOAKING

Data

- Cyrode - Cyrode Gull

- After 3 days of soaking, large amounts of cyrode

- The gut is sometimes described as having a "false stomach" wall, but it does not always give off an odor, and not everyone can detect that odor.

Discussion

cyrode is for backing, thickening of decoctions, ceremonial for temples, schools, public buildings and other, at the guidance of the affiant

Issue

SENSE OF G... ISSUE

Data

- After proper processing, most of the BMAA/neurotoxin are removed.

Discussion

if they eat a lot of flour, it all requires a lot of prep... it requires a lot of prep...

Data

side note for flying fox? seeds are among the favorite items

Discussion

on this raw seeds themselves have the potential to cause problems, particularly during preparation and so on.

Issue

This really isn't in the class to be

Discussion

ADJUSTMENT: ALSO caused through the intake of neurotoxin from raw Cyrode plant (seeds especially) after processing (e.g. partial digestion in other mammals, soaking, making of medicine)

Data

VE to Chamorro

not completely native Chamorro item

use of dirt most

Discussion

Cyrode Flour Safe to eat

More cyrode flour use during WWII due to food shortages.

Discussion

Alzheimer

- High proportion of senile plaques in smelling areas of brain

Discussion

Strains of rabbits exposed to intranasal Alzheimer salts showed evidence of direct uptake into the brain via nasal-olfactory pathways

Discussion

While these rabbits did not show Neurofibrillary tangles, injection of Alzheimer salts did lead to a disorder very similar to Alzheimer's disease.

Whiteboard

Current users: Aznx

Chat (0)

Aznx 5/16/06 1:35:09 PM HST: There.

Aznx 5/16/06 1:35:36 PM HST: I have an interesting way to look at this problem.

Quicksilver 5/16/06 1:35:42 PM HST: Tell us

Aznx 5/16/06 1:35:45 PM HST: Can you see how it fits inside a square?

bwang8 5/16/06 1:35:45 PM HST: yes

Quicksilver 5/16/06 1:35:52 PM HST: Yes

bwang8 5/16/06 1:35:53 PM HST: oh

bwang8 5/16/06 1:35:55 PM HST: yes

Quicksilver 5/16/06 1:36:01 PM HST: You are saying the extra spaces...

Aznx 5/16/06 1:36:05 PM HST: Also, do you see if you add up the missing areas

Quicksilver 5/16/06 1:36:11 PM HST: Yes...

Quicksilver 5/16/06 1:36:18 PM HST: they look similar to the original figures

Quicksilver 5/16/06 1:36:21 PM HST: figure

Aznx 5/16/06 1:36:21 PM HST: It is equivalent in size to the small circle in the pattern

Quicksilver 5/16/06 1:36:33 PM HST: Small circle?

Aznx 5/16/06 1:36:39 PM HST: The only part you would be missing out are the four squares of this square

Aznx 5/16/06 1:36:49 PM HST: on the outer areas of this square

Aznx 5/16/06 1:37:00 PM HST: Do you guys get what I mean?

bwang8 5/16/06 1:37:07 PM HST: yes

Quicksilver 5/16/06 1:37:08 PM HST: Show what u mean on the whiteboard

Quicksilver 5/16/06 1:37:11 PM HST: I dont get it

Aznx 5/16/06 1:37:14 PM HST: bwang you show him

Aznx 5/16/06 1:37:17 PM HST: since you get it

Whiteboard Content:

$$n = \frac{1}{2} \cdot 4n(n+1)$$

3D cube diagram

2D grid diagram with red squares

Problems with Classrooms of the Present

- Learning is fragmented
- Teacher is decentered



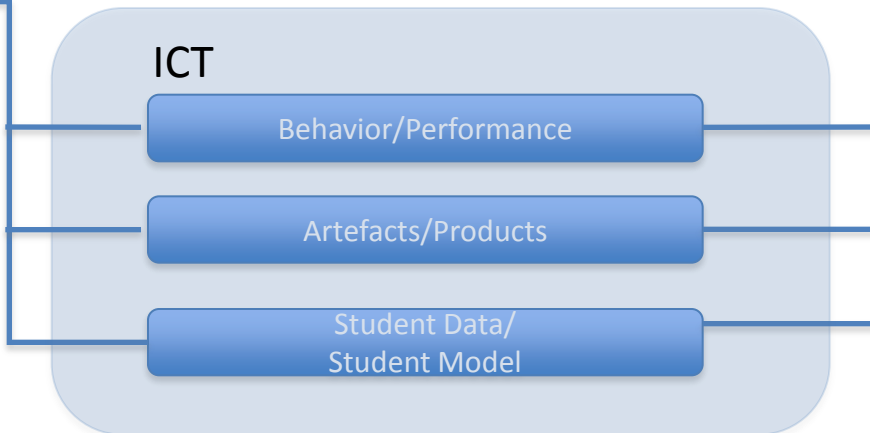
Student

Teacher

Classrooms of the 21st Century

-Learning is integrated with Information Ecologies

-Teacher is centered in classrooms with Computational & Methodological Support



DEMO OF COURSE PORTAL

DEMO OF FACEBOOK

DEMO OF ETHERPAD

DEMO OF CAMTASIA STUDIO

DEMO OF CLICKERS



CBS PILOT PROJECTS ON TETL

- **DIT-LAB** at Stuen, Howitzvej 60 (Interactive Classroom + Experience Lab)
- **7 Classrooms** at Kilen (Funded from the increased taximeter to CBS)
- **Hardware** for “Classrooms of the 21st Century”
 - Digital interactive whiteboards
 - Power outlets to support one laptop per student
 - Classroom Response Systems (Clickers)
 - Special paint to turn the walls into whiteboards
 - Movable furniture (in the future)
- **Software**
 - <http://teach.cbs.dk>
 - Existing best-of-the-breed TeTL applications
 - NEXT-TELL infrastructure (in the future)
- **Training**
 - Teacher Training Workshops (*in-service teachers*, [CBS LL course](#))
 - PhD Course on TeTL (*pre-service teachers*)

DISCUSSION