Education on the Horizon: Teaching and Learning with Technology

Week 3: Multimedia Learning Pt. 2

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Call for student assisstent

» Unterstützung im Forschungsprojekt „Schule leiten" und „E-LANE"

  » Schule leiten

  » E-LANE

» Aufgaben:

  » Unterstützung bei der Auswertung qualitativer und quantitativer Daten

  » Literaturrecherche, -kopie und –ausleihe

  » allgemeine Organisations-und Verwaltungsaufgaben

» Umfang:10 Stunden pro Woche

» Bewerbung per Mail an andre.meyer@uni-potsdam.debis 13.11.2019 mit Anschreiben, Lebenslauf und Abiturzeugnis

Presentation schedule

» You can find the final schedule from the <u>sign-up sheet</u> or the <u>updated syllabus</u>

» The first presentation will be scheduled on 2019-11-28

Recap

» Multimedia learning: present the material using various media types that are intended to foster learning.

    » Media types can include text, audio, static graphic (photos, drawings, maps, charts, figures), dynamic graphic (video, animation), or any other vehicles of information (we experience the world through different senses)

Thank you for the active discussion in Discord! Let's address some of the questions 😁

Difference between "environment" and "medium"

It wasn't clear to me before that reading a text on an iPad...is not multi media learning
— **Luisa/**

» The tablet is an learning *environment*

» You can either present single- or multi-*media* content in this environment

    » a "book behind glass" or a "interactive, media-rich" environment

Learning style theory: pros and cons

» Claims of the learning style theory:

>> Each person has a preferred way of receiving new information: visual, auditory, kinesthetic (True)

>> When learning something new, student will learn better when the instruction matches their preferred media types (False)

» Students do have preferences, but that don't translate directly to performance, because their knowledge/skill is often not tested directly from these sensory modalities

>> e.g., Students learn about additon by hearing a song vs. students learn about harmonious patteren by hearing a song, which makes more sense?

xx learning ≠ learning through xx

I still don't really understand why the teacher's voice is not a medium. I don't see a big difference between a voice and an audio recording.
— **Jenny/ErikM**

>> Auditory learning and learning through audio is different, same for visual leanring and learning through visual

>> Whether you are really trying to teach (and test) some information from this particular sensory modality, or simply use it as a vehicle.

Implentation of multi-media for different subjects

In PE lessons it might be more difficult (to use audio/visual), because to me movement is always something you have to experience in order to learn and improve it.
— **Luisa**

» For acquiring procedural-motor knowledge, dynamic imagery is actually quite powerful (learning by watching)

» But need to consider different visual perspectives

  » external vs. internal perspective

  » external perspective: learn about how to position different body parts

  » internal perspective: learn about how to position body in relation to the environment

Examples about visual perspectives

» External is bettern internal imagery: <u>gymnastics</u>

» Internal is better than external imagery: <u>slalom</u>

How to design a course with multi-media elements?

I wonder, how do I decide which medium will be the most fitting one, for the topic as well as for my students?
— **Leonie**

There's not a definite answer, but let's look at some rule of thumbs…👍

1. The multi-media element needs to have reprentational, not decorational, purpose

» Decorational: the primary instructional function of the element is to intrigue/motivate the learner

» Representational: the topic to be learned is explicitly depicted in the multi-media element

» Read more: Höffler, T. N., & Leutner, D. (2007). Instructional animation versus static pictures: A meta-analysis. *Learning and Instruction, 17*, 722–738.

2. Inclusion of multiple sensory modalities are usually helpful, given that they are meaninfully associated

» Storage of information is like a web

» More associations = better remembering

» Read more: Schüler, A., Scheiter, K., & van Genuchten, E. (2011). The Role of Working Memory in Multimedia Instruction: Is Working Memory Working During Learning from Text and Pictures? *Educational Psychology Review*, 23, 389–411.

3. Think about what you really want to teach first, and then, how to present them

» For example, when using visuals to teach language, do you really want to teach the visual details?

  » Example of using visuals to teach English alphabet versus Chinese characters, which is more appropriate?

Some hands-on examples

» Let's analyze together:

    » What kind of multi-meida elements are included?

    » Have they been used properly or not?

» Examples

    » <u>Support Net</u>

    » <u>PhotoFit Me</u>

    » <u>Finding the Truth</u>

    » <u>Museum of the Dead</u>