Next Step Fwd

New Teaching Trends

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New Models

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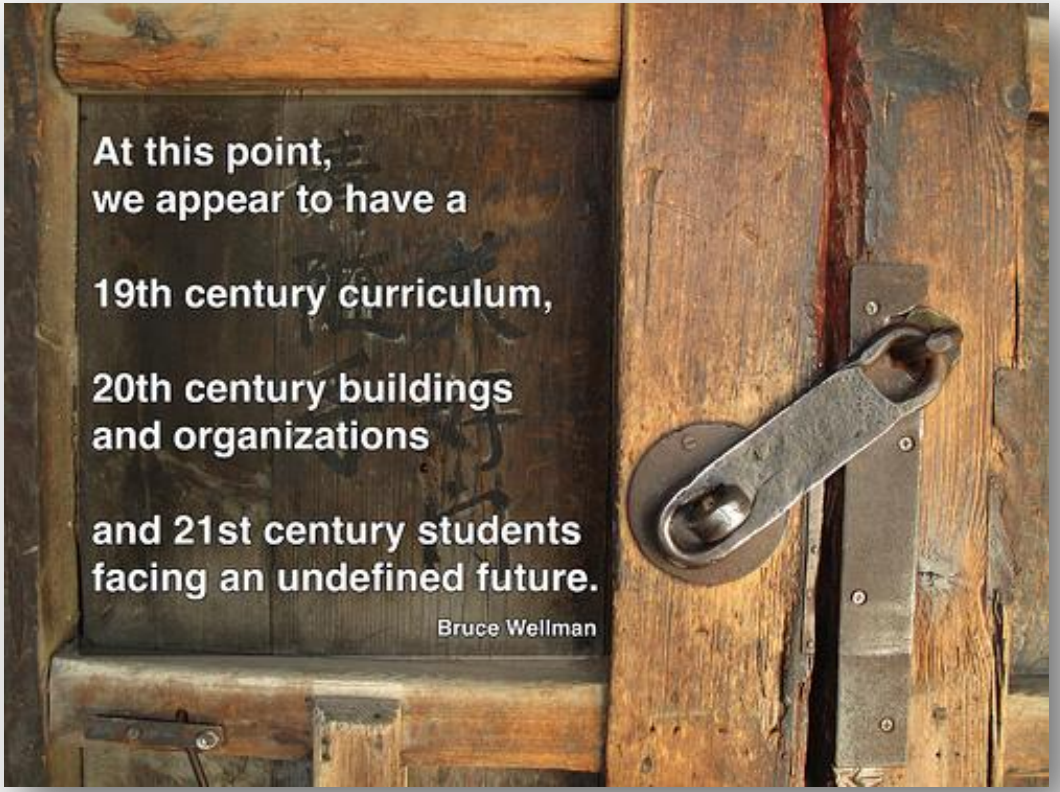
1. Industrial education

The industrial model of education, which emerged in the nineteenth and twentieth centuries, aimed to prepare young people for factory jobs requiring repetitive tasks. However, the 21st century poses new challenges which demand a new model.



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References

Leland & Kasten (2002) compare the industrial model with the post-industrial one.

Industrial model

- Conformity
  Preparing for factory jobs
- Identical curricula and expectations for all students
- Emphasis on basic skills of literacy and numeracy

Post-industrial model

- Critical thinking and creativity
  Preparing for ICT
- Learning is active, social, contextual, continuous and holistic
- Emphasis on social knowledge-making

References

2. A new model

2.1 Inductive teaching

According to Prince & Felder (2006, 2007) the new model needed in the 21st Century should be based on inductive teaching methods, in which students are presented with a challenge and then learn what they need to address it. The methods differ in the nature and scope of the challenge and in the amount of guidance provided by the instructor.

Method	Challenge	Students' role	Instructor's role
Inquiry-based learning (umbrella category including several inductive teaching methods)	• question to be answered • observation or data set to be interpreted • hypothesis to be tested	formulate good questions; identify & collect evidence; present, analyze and interpret results; formulate conclusions	facilitator, working with student groups and addressing class-wide problems when necessary

Method	Challenge	Students' role	Instructor's role
Discovery-based learning (not often used in its purest form)	• question • observation or data interpretation • hypothesis testing	work in self-directed way "discovering" facts and concepts by themselves	provides feedback on student efforts but offers little or no direction
Problem-based learning	open-ended, ill-structured, authentic real world problem Focus: solution process	work in teams to identify learning needs and develop a viable solution	facilitator, requires considerable subject expertise and flexibility
Project-based learning	final product—a design, a model	apply acquired knowledge in a project	facilitator
Case-based teaching	historical or hypothetical cases	analysis of the case and decision making	facilitator
Just in time teaching	question (answered by mail) before class	respond to questions (not covered material)	adjusts the lesson accordingly

Chart based on Prince & Felder (2006, 2007)

References

2.2 Authentic learning

Inductive methods usually result in authentic learning experiences with 10 design elements that can be adapted to any subject matter domain (Lombardi, 2007).

Real-world relevance	Ill-defined problem	Sustained investigation	Multiple sources
Collaboration	Reflection (metacognition)	Interdisciplinary perspective	Integrated assessment
	Polished products (project, presentation)	Multiple interpretations and outcomes	

References

3. New trends

The NMC Horizon Report (2014) identified the rethinking of teachers roles and a shift to deep learning approaches as the key trends in education today. An increase of focus on open content and hybrid learning designs (blended learning, flip classroom and the like) is also highlighted. The report pinpoints important developments in technology and their impact on education, helping rethink how schools work and creating personalized authentic learning experiences :

Digital strategies

- Bring Your Own Device (BYOD)
- Games and Gamification
- Flipped Classroom
- Social Media Technologies

Learning technologies

- Badges/Microcredit
- Massive Open Online Courses
- Online Learning
- Learning Analytics
- Mobile Learning
- Open Content

References

4. Conclusion

The purpose of this module has been to reflect on the need to rethink the current model of education and identify the emerging trends of this process. As the teachers are the key factor to make this change happen, teacher professional development is needed more than ever. The InTASC Model Core Teaching Standards and Learning Progressions for Teachers 1.0 (2013) provides a good starting point for teachers to self-evaluate and decide on the areas they want to improve and the new skills they want to develop. This constitutes the last item of the philosophy of teaching statement that you have started in the previous modules.

Take some time to reflect on this topic and write your conclusions.

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References

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Bruce Wellman Education Quote 12-21-2010. Quoted from a comment on David Truss's blog: http://pairadimes.davidtruss.com/question-everything/. Added to Flickr for David Truss's post: http://pairadimes.davidtruss.com/on-being-an-agent-of-change/comment-page-1/#comment-6947

Also watch the animation of Sir Ken Robinson's famous words on changing education:

http://www.ted.com/talks/ken_robinson_changing_education_paradigms

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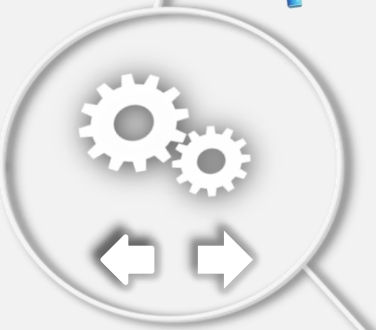

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2.2 Authentic learning

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3. New trends

Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2014). NMC Horizon Report: 2014 K-12 Edition. Austin, Texas: The New Media Consortium.

http://cdn.nmc.org/media/2014-nmc-horizon-report-k12-EN.pdf

See also NMC horizon report Higher education edition here:

http://www.nmc.org/pdf/2014-nmc-horizon-report-he-EN.pdf

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4. Conclusion

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