

Navigating the Future: Bridging Smart Education around the World

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As technology got smarter... Remote learning isn't new: Radio instruction in the 1937 polio epidemic

Katherine A. Foss, The Conversation
<https://theconversation.com/remote-learning-1937-radio-instruction-in-the-1937-polio-epidemic-143792>

Remote learning isn't new: Radio instruction in the 1937 polio epidemic

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June 25, 2021 Is this Smart Learning...?

SMART Learning Suite lets teachers deliver lessons, assess, collaborate and more all in one place
Luke Edwards
<https://www.techlearning.com/how-to/what-is-smart-learning-suite-best-tips-and-tricks>

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1. How do we define smart education, and what are its core components? Can you share your insights into our definition and framework?

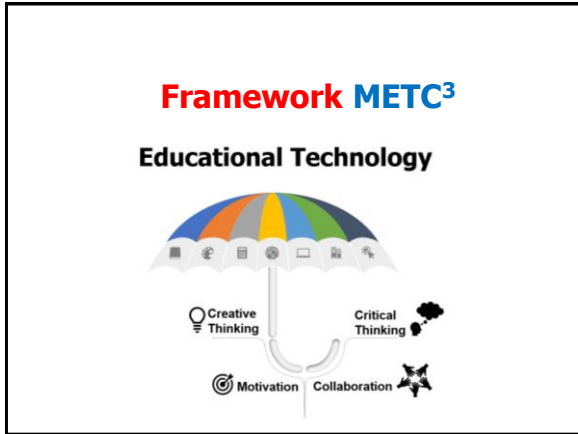
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1. How do we define smart education, and what are its core components? Can you share your insights into our definition and framework?

- Smart Education:** A learning environment that fosters interactive, collaborative, engaging, challenging, and personalized and adaptive learning that is accessible to diverse learner needs and experiences that can dynamically change over time.

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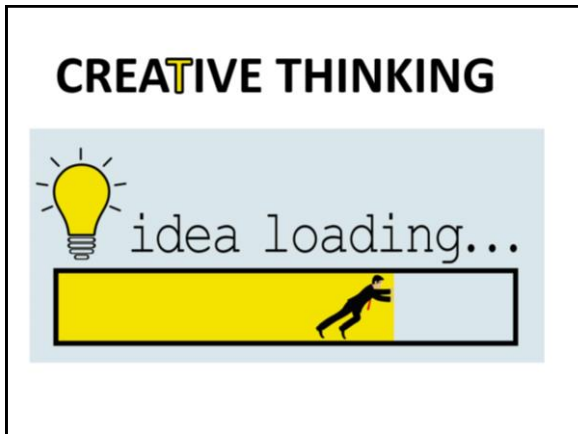
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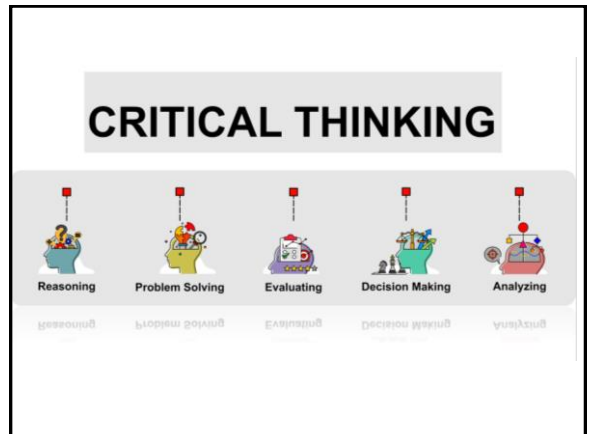
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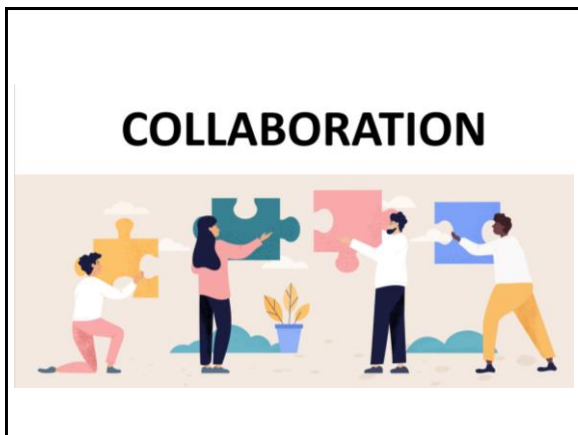
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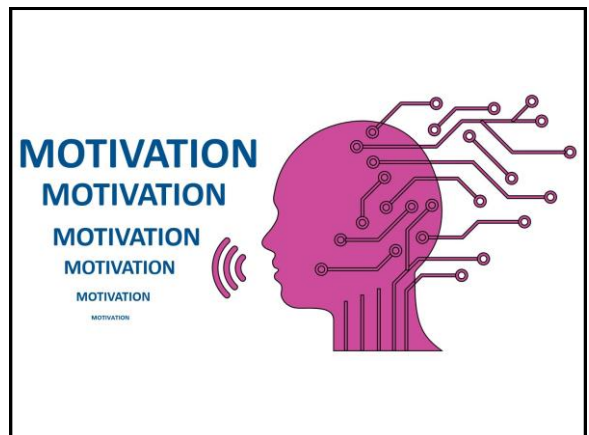
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MOTIVATION

GOAL

VISION

ADMIRE

SUPPORT

TEAMWORK

MENTOR

PERFORMANCE

SUCCESS

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Introducing the TEC-VARIETY Framework

<http://tec-variety.com/>
<http://tec-variety.com/TEC-VARIETY-Chinese.pdf>

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

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September 2022 Commonwealth of Learning

Khoo, E., & Bonk, C. J. (2022). *Motivating and Supporting Online Learners*. Burnaby, BC, Canada: Commonwealth of Learning. **Free book available:** <http://hdl.handle.net/11599/4481> and free course available: <https://colcommons.org/welcome/course/details/8>; <https://www.colvee.org/>

Motivating and Supporting Online Learners

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The R2D2 Model: Read, Reflect, Display, Do...

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2. Can you share successful case studies or best practices of smart education from various contexts to illustrate its impact and potential?

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March 8, 2024 Paul Kim, Stanford

Cal State Fresno, TIP Conference - Dr. Paul Kim: Trends of AI in Education and New Competencies for the Future
 Video (1:17:03)
<https://www.youtube.com/watch?v=DsUEhx1Nku8>
 Keynote ("Trends of AI in Education and New Competencies for the Future") last week at the Fresno State University event, Exploring Ethical Uses of AI.

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SMILE Used Around the World

For example, I worked in Mexico with various indigenous community schools.

TIP Conference - Dr. Paul Kim: Trends of AI in Education and New Competencies for the Future

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May 29, 2024 Learning is More Game-based What is smileUP & How to use it? SMILE, Stanford

<https://www.youtube.com/watch?v=nh1lIRcSAIWo>

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Example of asking a Level 1 question (i.e., remembering) and system feedback in the Ask.SMILE system

Ask a question
With the help of GPT-3.5, your question will be evaluated on a rubric from Level 1 to Level 5 aligned to Bloom's Taxonomy

What are salt crystals?

Submit question

This is a level 1 question as it requires simple recall and comprehension of information. The question asks for a definition or description of salt crystals, which can be answered by providing basic knowledge or research on the topic.

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Example of asking a Level 2 question (i.e., understanding) and system feedback in the Ask.SMILE system

Ask a question
With the help of GPT-3.5, your question will be evaluated on a rubric from Level 1 to Level 5 aligned to Bloom's Taxonomy

Why does salt water crystallize?

Submit question

This question falls under level 2 of Bloom's Taxonomy. It requires comprehension of a scientific concept, specifically the process of crystallization in salt water. The question does not involve any hypothetical or scenario situations, nor does it require advanced analysis or evaluation. Instead, it can be answered by recalling and understanding the scientific principles behind the crystallization process in salt water.

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Example of asking a Level 3 question (i.e., applying) and system feedback in the Ask.SMILE system

Ask a question
With the help of GPT-3.5, your question will be evaluated on a rubric from Level 1 to Level 5 aligned to Bloom's Taxonomy

How does the variety of salt influence surface tension and its role as a mordant in the effectiveness of fabric dyeing?

Submit question

Well done! This question can be considered a level 3 question. It involves an uncertain situation as it explores the influence of different varieties of salt on both surface tension and their role as mordants in fabric dyeing. The question requires thinking beyond simple recall and applying knowledge of chemistry and textile dyeing processes to analyze and evaluate the effects of salt varieties on fabric dyeing. Moreover, it is well-formulated and free of any linguistic or cultural errors. Great job on formulating a level 3 question!

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March 8, 2024 Generative AI as a Coach to Help Students Enhance Proficiency in Question Formulation: It's Time to SMILE (Kim, Wang, & Bonk, in review)

Table 2: Question Level Statistics

	Value	Percent
Number of Observations (N)	25,973	100%
Level 1 Remembering Questions	7,073	27.2%
Level 2 Understanding Questions	4,401	16.9%
Level 3 Applying Questions	2,574	9.9%
Level 4 Analyzing Questions	3,832	14.9%
Level 5 Evaluating/Creating Questions	8,093	31.1%
Mean Level of Questions	3.056	
Standard Deviation (SD)	1.627	

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March 8, 2024
Generative AI as a Coach to Help Students Enhance Proficiency in Question Formulation: It's Time to SMILE
(Kim, Wang, & Bonk, in review)


Table 3: Cross-tabulation of Average Level and First Level of User Questions Generated

First Level	Average Question Level					Total
	1	2	3	4	5	
1	486	208	176	45	0	915
2	13	247	110	78	1	449
3	0	29	152	58	0	239
4	0	23	39	242	14	318
5	0	15	76	117	430	638
Total	499	522	553	540	445	2559

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May 11, 2020
What is smileUP & How to use it?
SMILE, Stanford
<https://www.youtube.com/watch?v=pbiU8sSALWo>


SMILE is connected to ChatGPT to give feedback and guidance. Have student experiment to see who can ask Level 4 and Level questions. Professor Trang Phan fosters critical thinking by having her education students at Fresno State ask the same question and phrase differently every time and reflect on the authenticity, accuracy, trustworthiness, and the ethical and moral nature of the responses. And also record the level of question according to SMILE.



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May 11, 2020
What is smileUP & How to use it?
SMILE, Stanford
<https://ask.smile.stanford.edu/>

Specifically, SMILE will be used to assess student's critical thinking and GPT 3.5 to provide constructive feedback to the questions. Accordingly, students will be given access to SMILE (<https://ask.smile.stanford.edu/>) to ask questions of their own. SMILE will rank the student's question from level 1 (i.e., the most basic) to level 5 (i.e., the most critical) based on its breadth and depth and its analytical nature using the Bloom Taxonomy criteria. **50 or more questions and write a reflection report on the breadth and depth of the response of ChatGPT**



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3. How do you envision the future evolution of smart education, especially considering its role in achieving global education goals with the recent developments in generative AI?




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January 17, 2024
AIs Enrolling as Students in Michigan University's Experiment
Lauren Coffey, Inside Higher Ed

Ferris State University (Artificial intelligences Ann and Fry will listen in to online courses before making their way to the classroom, ultimately eyeing Ph.D.s.)
<https://www.insidehighered.com/news/tech-innovation/artificial-intelligence/2024/01/18/ai-strolling-students-michigan-university>

AIs Enrolling as Students in Michigan University's Experiment




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January 11, 2024
The world's first AI powered course taught completely by AI teachers
Kevin Hogan, eCampus News

<https://www.ecampusnews.com/innovation-insights/2024/01/11/the-worlds-first-ai-powered-course-taught-completely-by-ai-teachers/>

The world's first AI-powered course taught completely by AI teachers?

Kevin Hogan
 January 11, 2024
 Otermans Institute has taken a bold step in transforming the educational landscape as its AI-powered teachers are now teaching an entire 9-lesson course



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May 6, 2024
AI-guided discussion boards
 Max Evans, Padlet
<https://padlet.blog/ai-guided-discussion-boards/>

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November 4, 2022
Learning is More Synchronous
 Synchronous hybrid English class for rural Chinese students

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February 16, 2024
OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying

Prompt: Several giant woolly mammoths approach breaching through a snowy meadow, their long woolly fur lightly blows in the wind as they walk. Snow covered trees and dramatic snow capped mountains in the distance. mid afternoon light with wispy clouds and a low sun in the distance creates a warm glow. the low camera view is stunning capturing the large furry mammal with beautiful photography. depth of field.

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February 16, 2024
OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying
 Tony Ho Tron, The Daily Beast
<https://www.thedailybeast.com/openais-video-generator-sora-is-stunning-and-utterly-terrifying>

Prompt: Photorealistic closeup video of two pirate ships battling each other as they sail inside a cup of coffee.

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 Tony Ho Tron, The Daily Beast
<https://www.thedailybeast.com/openais-video-generator-sora-is-stunning-and-utterly-terrifying>

Prompt: Animated scene features a close-up of a short fluffy monster kneeling beside a melting red candle. The art style is 3D and realistic, with a focus on lighting and texture. The mood of the painting is one of wonder and curiosity, as the monster gazes at the flame with wide eyes and open mouth. Its pose and expression convey a sense of innocence and playfulness, as if it is exploring the world around it for the first time. The use of warm colors and dramatic lighting further enhances the cozy atmosphere of the image.

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February 16, 2024
OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying
 Tony Ho Tron, The Daily Beast
<https://www.thedailybeast.com/openais-video-generator-sora-is-stunning-and-utterly-terrifying>

Prompt: A stylish woman walks down a Tokyo street filled with warm glowing neon and animated city signage. She wears a black leather jacket, a long red dress, and black boots, and carries a black satchel. She wears sunglasses and red lipstick. She walks confidently and casually. The street is damp and reflective, creating a mirror effect of the colorful lights. Many pedestrians walk about.

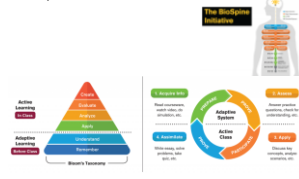
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August 20, 2019
Learning is More Personalized
ASU develops world's first adaptive-learning biology degree, ASU News

<https://www.asu.edu/news/2019/08/20/adaptive-learning-biology-degree>
 Flipping the classroom increased performance and persistence. "Beckett Sterner and I got an ovation at the end of the junior-level major's course, Evolution – Biology 245, and also at the end of the class on zombies.... The results of the first effort were impressive."
 "In its first semester, we saw student pass rates, in a nonmajor Biology 100 course called The Living World, improve by 24% and dropout rates reduce by 90%..."



ASU develops world's first adaptive-learning biology degree
 School of Life Sciences leads effort to transform undergraduate science education



The Blueprint Institute

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January 20, 2022
Learning is More Massive
Arizona State University Announces Effort To Educate 100 Million Students Worldwide
Michael T. Nietzel, Forbes

Video (2:07): <https://www.youtube.com/watch?v=1667917472>
<https://thunderbird.asu.edu/lifelong-learning/100-million-learners>



Arizona State University Announces Effort To Educate 100 Million Students Worldwide


- Global Leadership in the Fourth Industrial Revolution
- Customer Experience and Digital Marketing in a Global World
- Global Entrepreneurship and Sustainable Business
- Data Analytics and Digital Transformation in a Global World
- Global Financial Accounting



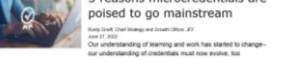
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June 6 and 27, 2022
Learning is More Modular
Microcredentials and Certificates
 Susan Manning, Ed.D, Director of Customer Education, Credly, eSchool



<https://www.asu.edu/news/2022/06/06/the-macro-impact-of-microcredentials/>
<https://www.asu.edu/news/2022/06/27/3-reasons-microcredentials-are-poised-to-go-mainstream/>



The macro impact of microcredentials
 Susan Manning, Ed.D, Director of Customer Education, Credly
 June 6, 2022
 By pairing microcredentials with digital credentials, individuals



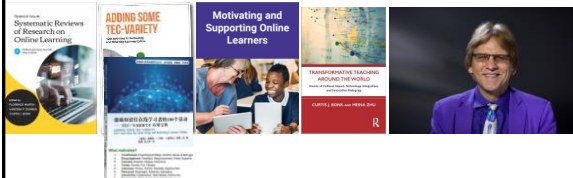
3 reasons microcredentials are poised to go mainstream
 Holly Quast, Chief Strategy and Growth Officer, IST
 June 27, 2022
 Our understanding of learning and work has started to change—our understanding of credentials must now evolve, too

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Any Questions or Comments?
 Slides at: [TrainingShare.com](https://www.trainingshare.com) (go to "Archived Talks")
 Papers: [PublicationShare.com](https://www.publicationshare.com)
 Free book: <http://tec-variety.com/>
 Free Course: <https://colcommons.org/welcome/coursedetails/8>
 Curtis J. Bonk, IST Professor, Indiana University
 Email: cjbonk@indiana.edu; <http://curtbonk.com/>

Free! Free! Free! Not Free!



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