



Research-Based Educational Innovations

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What makes me happy as a teacher?



For today...



- Society 5.0
- Innovation and Society 5.0
- Innovation in Education
- Research-Based Innovations in Education
- My Research-Based Innovation Plan



As Educators....

My Innovation Plan

- | | |
|--|--|
| 1. List your "I feel you" things with your students | |
| 2. Choose 1 among the "I feel you" list that you intend to address | |
| 3. What do you think will make you happy and content with your classroom in relation to that "I feel you" thing? | |



Society 5.0



Society 5.0

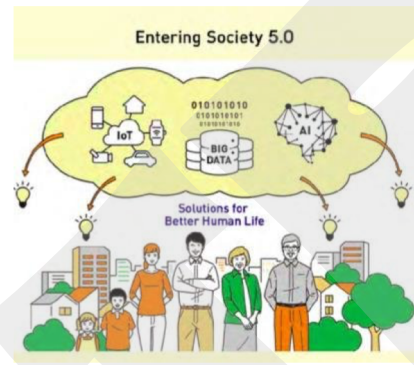
- Society 5.0 is not a prediction of the future, but a concept that shows the bright future we want to create.
- Society 5.0 as “A human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space” (Keidanren, 2016, p. 5).





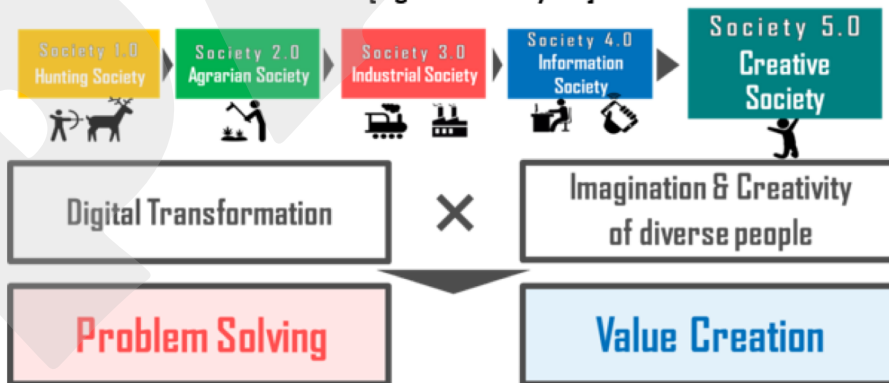
Society 5.0

- Researchers of Society 5.0 focused their attention on circumstances related to knowledge and information, humans' work, attributes of work places, solving of social problems and limitations in humans' work abilities (Higashihara, 2018; SCTI, 2019; Nakanishi, 2019).
- Society 5.0 foresees usage of modern information technologies and solutions to free humans from exhausting routine work and improve using of available information (Higashihara, 2018; Shiroishi et al., 2019).



Tracing Society 5.0

[Figure 1 Society 5.0]



Source: Society 5.0— Co-Creating the Future- (Keidanren)



Essences & Consequences of Society 5.0

- **The Now!**
 - projects that do not position citizens as the main stakeholder are destined to fail
 - academics focus on scholarly publications
 - industry emphasize technology commercialization and marketing
- **The Future!**
 - Bringing people together, supported by ethical technology.
 - Injecting empathy and understanding into technological solutions moving forward.
 - Creating new methods for operating individualistic system
 - Collaborative operational concept boosted by current societal interconnectivity



Innovation & Society 5.0

- Society 5.0 established innovations and innovativeness as necessary preconditions and leading accelerators for solving sustainability problems in society (Keidanren, 2016; SCTI, 2019).
- Society 5.0 continues this research stream and broadens innovativeness with non- technological innovations, social innovations and innovativeness.
- Keidanren (2016; p. 8): “new social practices that aim to meet sustainable social needs in a better way than the existing solutions resulting from working conditions, education, community development or health”.



Sustainable Innovation

- Fundamental concept of Society 5.0
- Understood as a process where sustainable environmental, social, and financial considerations are integrated into organizational systems.





Innovation



Innovation

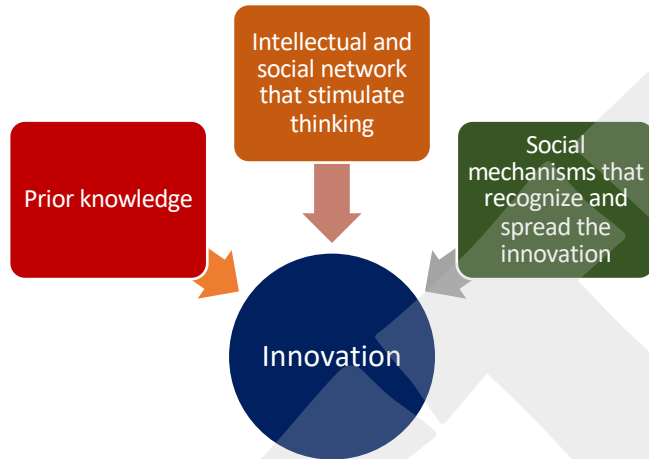
- Arises in unexpected places, coming across people in various fields
- Promotes the noticing of new things, much like in a wide-open natural ecosystem.
- Innovation is to be regarded as an instrument of necessary and positive change.

(Serdyukov, 2017)





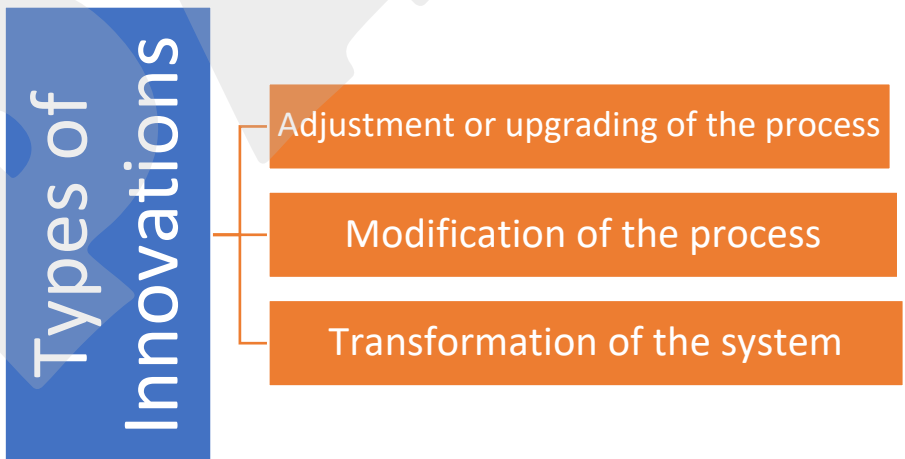
For innovation to occur...



(Office of Innovation and Improvement, 2016; Resilient Educator. 2020, March 6)



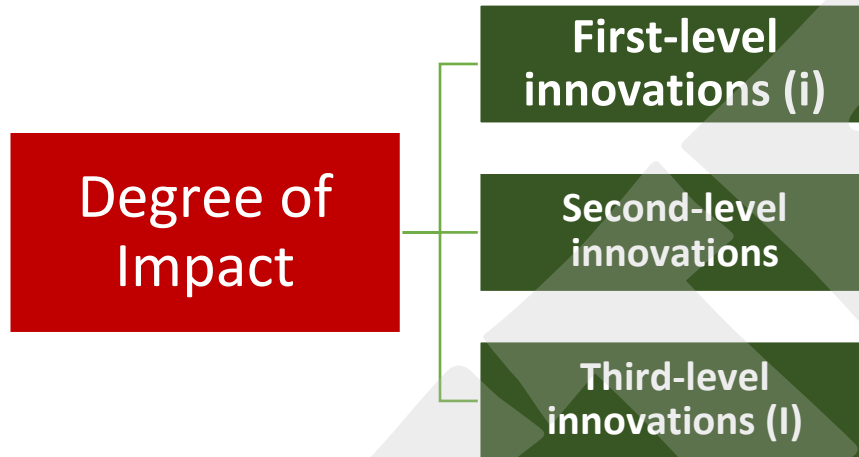
Innovations in Education



(Office of Innovation and Improvement, 2016; Resilient Educator. 2020, March 6)



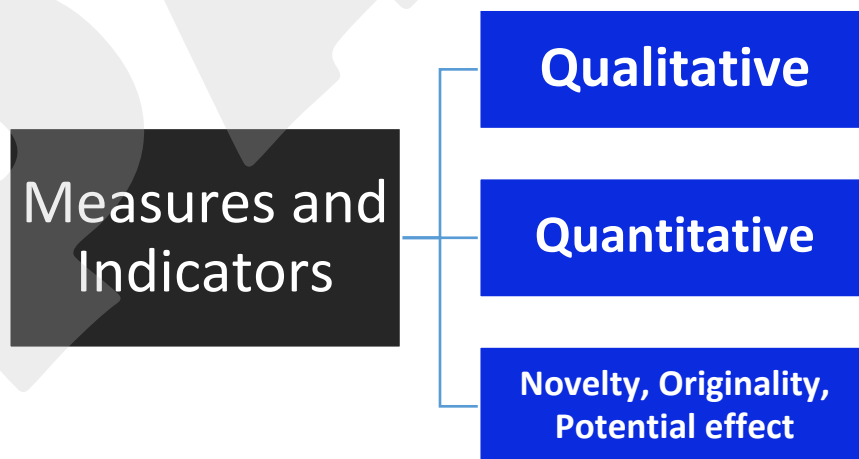
Innovations in Education



(Office of Innovation and Improvement, 2016; Resilient Educator. 2020, March 6)



Innovations in Education



(Office of Innovation and Improvement, 2016; Resilient Educator. 2020, March 6)



Sample Innovations

Political

- No Child Left Behind
- Education for All

Social

- Education Act of 1982
- Individuals with Disabilities Education Act (IDEA)

Philosophical

- constructivism
- objectivism



Sample Innovations

Cultural

- moral education
- multiculturalism
- bilingual education

Pedagogical

- competence-based education,
- STEM (curriculum choices in school)

Technological

- computer-based learning
- networked
- e-learning, e-learning



Other Innovations

- “I set my math & science units for my third graders up like college classes. Students start with picking a particular major and at the end of the unit, we work on making connections on how each lesson relates to the real world and the job they each choose individually. My students absolutely love the opportunity to be treated like adults and explore future options.”
– *Jade*
- “The most innovative thing I’ve done in my classroom is using a TAP (Teacher Advancement Program) rubric in my whole lesson where there are 19 indicators to follow. Some of the indicators are standards and objectives, activities and materials, feedbacking, questioning, etc. These indicators are true testament that if this TAP rubric is done daily, I can move students daily. Move means students’ academic growth. There is nothing more rewarding for a teacher than to see his or her students academic grow, improve, or increase. That’s the beauty of the TAP rubric.”
– *Marlyn*



Other Innovations

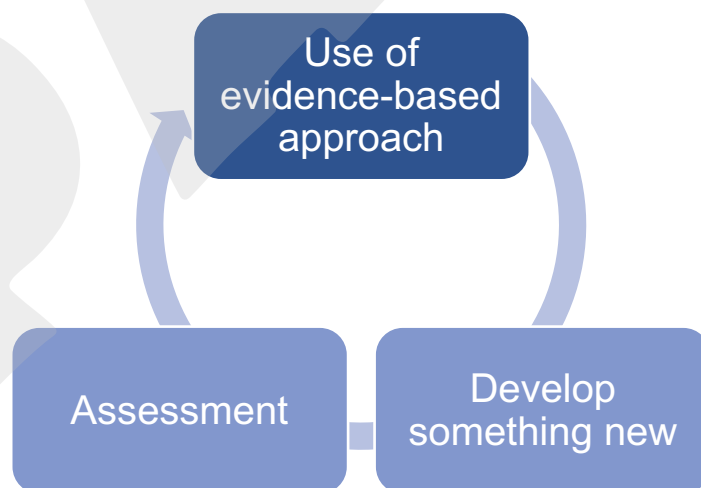
- I feel that I’ve been far more proactive this semester in reaching out to students and tracking the students. Within the first two weeks of the unit I went through all of the data on Moodle and I wrote to every student who had not engaged. --*Kathy*
- We used to turn the cameras off in the last ten minutes or so and we would just talk to the students and let them know that we wanted to check in with them and talk to us about how life was, how they were going. No recording was on. And we all loved that time of the session because the students really opened up . . . [We] would set themes each week ‘What are you cooking this week or those sorts of things’ --*Kathy*



Research-based Educational Innovations



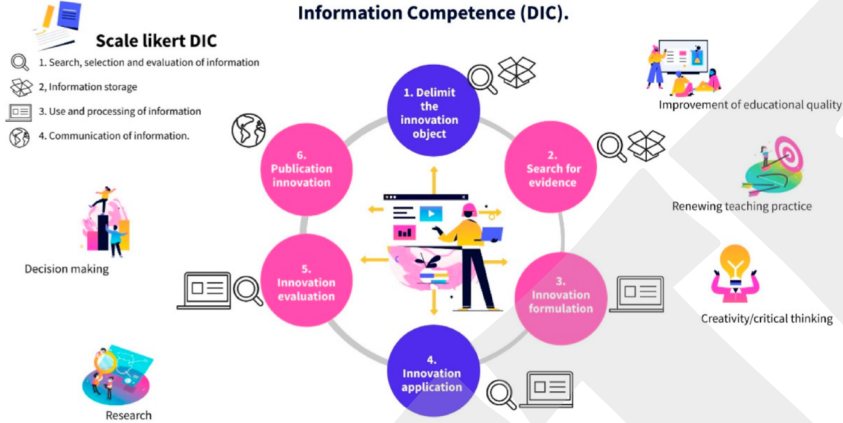
Research-based Educational Innovation





Research-based Educational Innovation

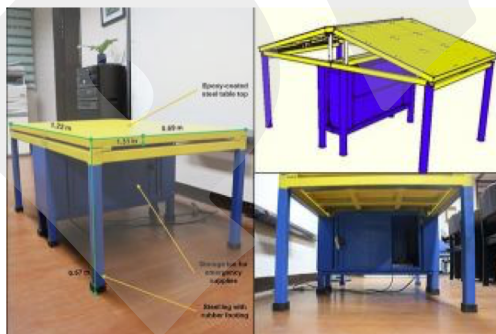
Educational innovation model of evidence-based teaching-learning (IEBE) linked to Digital Information Competence (DIC).



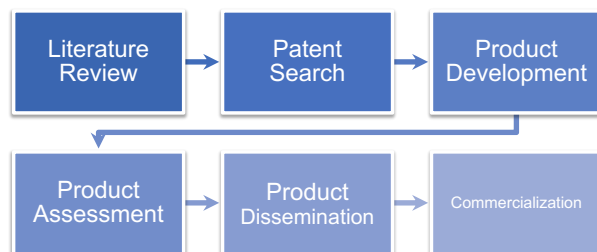
Sarango-Lapo, C. P., Mena, J., & Montoya, M. S. R. (2021). Evidence-Based Educational Innovation Model Linked to Digital Information Competence in the Framework of Education 4.0. *Sustainability*, 13(18), 10034. <https://doi.org/10.3390/su131810034>



Research-based Educational Innovation

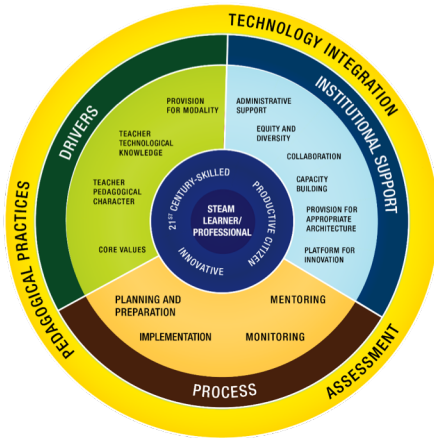


LAMESA (Life-Saving Automated Mesa to Endure Seismic Activity)

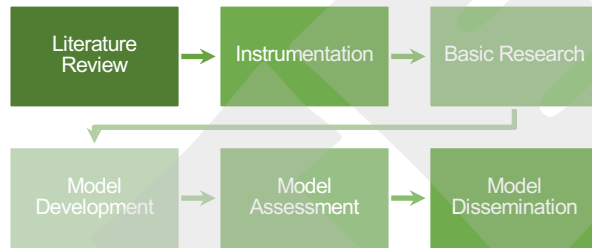




Research-based Educational Innovation



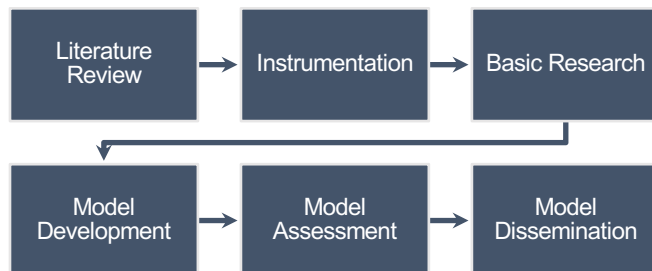
TPACK in Philippine STEAM Education



Research-based Educational Innovation



Educating Science Teachers for All (ESTA)



Teacher Innovations

Teacher Innovations


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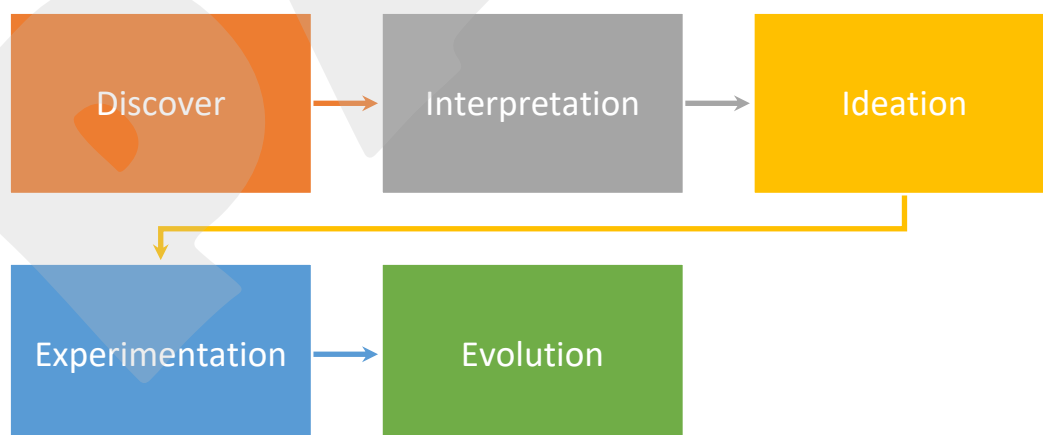


10 Ways Educators Can Be Innovative

- Mindset
- Self-Reflection
- Asking Open Ended Question
- Create Flexible Learning Environments
- Personality Matters: Create A Place For All Learners
- Use Problem-Finding
- Let Students Take Risks And Fail
- Consider A Flipped Classroom Model
- Invite Entrepreneurs And Innovators Into The Classroom
- Use The Design-Thinking Process



Design Thinking Process





Innovative Curriculum to Prepare New Teachers

- Valuing diversity
- Learning about different cultures
- Preparing to serve as role models
- Making connections between theory and practice
- Strengthening subject matter knowledge.

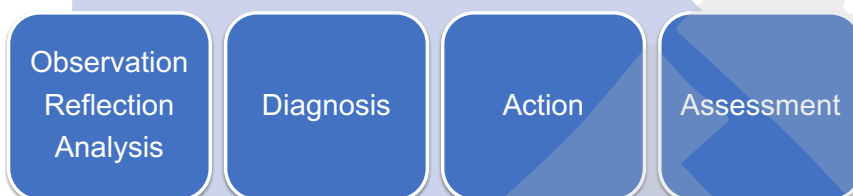


Innovative Instructional Practices

- Teacher reflection—asking participants to keep journals of their teaching
- Cooperative learning
- Group projects
- Application of theories learned in courses to concrete issues in their classrooms
- Analysis of situations depicted in teaching cases
- Analysis of videotapes of themselves teaching
- Emphasis on learning by discovery rather than by verbal instruction
- Use of performance assessment to document breadth and depth of candidates' learning
- Service learning in community settings



Innovations in Education



Technocentric Syndrome

- Belief that technology will solve all instructional difficulties anyway





Online Learning Concerns

Productive online learning also depends on well-developed learning, technology, critical thinking, research, and even reading and writing skills, as well as strong intrinsic motivation, perseverance, and self-efficacy.



Planning my Innovation



Task: My Innovation Plan

Proponents:

My Innovation Plan	
1. List your "I feel you" thing with your students	
2. Choose 1 among the "I feel you" list that you intend to address	
3. What do think will make you happy and contented with you classroom in relation to that "I feel you" thing?	
4. Cut it short into something like a "Working Title"	
5. What would you do to address that "I feel you" thing so that you will be happy and contented with your classroom?	
6. Let's break it up into pieces: List the process you intend to do to address the "I feel you" thing.	
7. What would be an appropriate and suited question/objective for each process?	



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