



## THE EFFECTIVE METHODS AND INNOVATIVE TECHNIQUES ABOUT PROPOSED PEDOGOGICAL SKILLS

Umida Nigmatjanovna

Teacher of The Department of Foreign Languages in Exact and Natural  
Directions of Tashkent State Pedagogical University

### Annotation

There is a general belief that educational systems should equip students with the skills and competencies they need to adapt to an ever-changing environment. Critical thinking, problem solving, collaboration skills, invention, digital literacy, and adaptability are among qualities that are frequently mentioned. What is debatable is the optimal way to achieve the development of such skills, specifically which teaching and learning methodologies are ideal for supporting or enabling the development of complex skills. We build on our prior work in our Innovating Pedagogy report series by looking at new types of pedagogy for an interactive environment in this piece.

**Keywords:** Effective methods, innovative techniques, pedagogical skills, educational theories, innovative aspects of pedagogy, proposed pedagogies, practical process.

### Introduction

We present a collection of cutting-edge pedagogical approaches that have the potential to alter teaching and learning. The following five dimensions comprised an integrated framework for selecting pedagogies for inclusion in this article:

- Relevance to effective educational theories;
- Research evidence about the effectiveness of the proposed pedagogies;
- Relation to the development of twenty-first century skills,
- Innovative aspects of pedagogy,
- level of adoption in educational practice.

The chosen pedagogies, such as formative analytics, teach back, place-based learning, learning with drones, learning with robots, and citizen inquiry, are either linked to specific technology breakthroughs or have arisen as a result of a deeper understanding of learning science. Each one is described in terms of the framework's five dimensions. The Organization for Economic Co-operation and Development (OECD, 2018) sees essential learner qualities as the acquisition of skills to embrace complex challenges and the development of the person as a whole, valuing common prosperity, sustainability, and wellbeing in its vision for the future of education in 2030. Wellbeing is defined as "equitable access to quality of life, encompassing health, civic





involvement, social relationships, education, security, life pleasure, and financial security." To realize this vision, learners will need a diverse range of skills and competencies that will enable them to behave as "change agents," capable of making a good impact on their surroundings by developing empathy and predicting the implications of their actions.

Critical thinking, problem solving, teamwork, communication, and negotiating skills, as well as literacy, multilingualism, digital, personal, social, and "learning to learn" competencies, citizenship, entrepreneurship, and cultural awareness, are all covered by these frameworks. Cognitive, health, and socio-emotional underpinnings, such as literacy, numeracy, digital literacy, and data numeracy, physical and mental health, morality, and ethics, are emphasized in a similar vein.

The question we are asked to answer is whether the education vision of the future the issue we're asked to answer is whether or not the future education vision, or the development of the skills needed to cope with an ever-changing society, has been realized or can be realized. In this study, we argue that the gap between educational vision and present teaching practice can be closed by adopting and implementing proper pedagogy that has been proved to contribute to the overall development of a person. What works and for whom in terms of learning and development can provide guidelines to teaching practitioners on how to modify or update their teaching in order to achieve desired learning outcomes; what works and for whom in terms of learning and development can provide guidelines to teaching practitioners on how to modify or update their teaching in order to achieve desirable learning outcomes. Although educational institutions may have already implemented new educational technology equipment (such as mobile devices), this has not always been accompanied by changes in teaching and learning practices. Enduring changes can be achieved by advancements in "pedagogy," or "the philosophy and practice of teaching, learning, and assessment," rather than just introducing technology into classrooms.

Seven academics, authors of the various Innovating Pedagogy reports, critically reflected on which of these approaches have the strongest evidence and/or potential to transform learning processes and outcomes to meet the future educational skills and competences described by OECD and others after seven years of gathering a total of 70 innovative pedagogies. We chose six options based on five criteria and lengthy debate that we believe have the most evidence and/or possibility for future education:

1. Formative analytics,
2. Teachback,
3. Place-based learning,
4. Learning with robots,





5. Learning with drones,
6. Citizen inquiry.

Formative analytics is a way for two or more people to demonstrate that they are advancing toward a shared understanding of a complex topic by "helping the learner to reflect on what is learnt, what may be improved, which goals can be accomplished, and how to move forward." Place-based learning draws learning opportunities from local community settings, allowing students to relate abstract concepts learned in the classroom and textbooks with real-world issues. Learning with robots could save up time for teachers to focus on easy, repetitive tasks while also providing scaffolding for students. Drone-assisted learning is being utilized to augment fieldwork by allowing students to explore outdoor physical areas. Finally, citizen inquiry describes ways that members of the public can learn by initiating or joining shared inquiry-led scientific investigations.

We present a comprehensive framework for selecting pedagogies. The framework was developed as a consequence of ongoing talks among the paper's seven authors about how educational practitioners should recognize and use some methods of teaching and learning while avoiding others. The model's five components are outlined below:

- **Relevance to effective educational ideas:** the first criterion asks if the proposed pedagogy is related to certain educational theories that have been proved to improve learning.
- **The second criterion is research evidence about the efficacy of the suggested pedagogies.** This refers to actual studies that have been conducted to assess the proposed pedagogy and its outcomes.
- **Relationship to the development of twenty-first-century skills:** the third criterion asks if the pedagogy can help with the development of twenty-first-century skills or the 2030 education vision (as described in the introduction section).
- **Aspects of pedagogy that are innovative or new:** the fourth criterion specifies what is innovative or new in regard to the suggested pedagogy.
- **Level of adoption in educational practice:** the final criterion incorporates data on existing levels of adoption in education in order to identify knowledge gaps and suggest future research options.

The Strength of Evidence Pyramid classifies different categories of evidence according to their strength, with expert judgments being the weakest and meta-analysis or synthesis being the strongest. While the bottom of the pyramid refers to "practitioners' wisdom about teaching and learning," the next two levels refer to peer-reviewed and published primary sources of evidence, both qualitative and quantitative. They are mostly case-studies, based on either the example of a single





institution, or a cross-institutional analysis involving multiple courses or institutions. The top two levels involve careful consideration of existing resources of evidence and inclusion in a synthesis or meta-analysis.

Education, as opposed to other disciplines such as medicine and agriculture, has been less concerned with evaluating different pedagogical approaches and determining their impact on learning outcomes. The argument often made is the difficulty in evaluating learning processes, especially through experimental methodologies, due to variability in teaching conditions across classrooms and between different practitioners, that may inhibit any comparisons and valid conclusions. Mixed-methods evaluations could identify how faithfully an intervention is applied to different learning contexts or for example, the degree to which teachers have been engaged with it.

Their development of the teaching and learning toolkit provides an overview of existing evidence about certain approaches to improving teaching and learning, summarized in terms of impact on attainment, cost and the supporting strength of evidence. Amongst the most effective teaching approaches are the provision of feedback, development of metacognition and self-regulation, homework for secondary students, and mastery learning. The importance of evidence generation is also evident in the explicit focus of Higher Education institutions in understanding and increasing educational effectiveness as a means to: tackle inequalities and promote educational justice, provide high quality education for independent and lifelong learners, develop criticality and deepen learning and improve student retention and performance in online and distance settings.

## **Conclusion**

The generation of evidence can help identify or debunk possible myths in education and distinguish between practitioners' beliefs about what works in their practice as opposed to research evidence emerging from systematically assessing a specific teaching approach. A characteristic example is the "Learning Styles" myth and the assumption that teachers should identify and accommodate each learner's special way of learning such as visual, auditory and kinesthetic. While there is no consistent evidence that considering learning styles can improve learning outcomes many teachers believe in learning styles and make efforts in organizing their teaching around them. In the same study, one third of participants stated that they would continue to use learning styles in their practice despite being presented with negative evidence. This suggests that we are rather in the early days of transforming the





practice of education and in particular, developing a shared evidence-based mindset across researchers and practitioners.

### References

1. Hadwin, A., Järvelä, S., and Miller, M. (2011). "Self-regulated, co-regulated, and socially shared regulation of learning," in Handbook of Self-Regulation of Learning and Performance, eds B. Zimmerman and D. Schunk (New York, NY: Routledge), 65–84.
2. Ferguson, R., Barzilai, S., Ben-Zvi, D., Chinn, C. A., Herodotou, C., Hod, Y., et al. (2017). *Innovating Pedagogy 2017: Open University Innovation Report 6*. Milton Keynes: The Open University.
3. Ferguson, R., and Clow, D. (2017). "Where is the evidence? A call to action for learning analytics," in Proceedings of the 6th Learning Analytics Knowledge Conference (Vancouver, BC: ACM), 56–65.
4. Ernst, J., and Monroe, M. (2004). The effects of environment-based education on students' critical thinking skills and disposition toward critical thinking. *Environ. Educ. Res.* 10, 507–522. doi: 10.1080/1350462042000291038
5. Doyle, C., Li, Y., Luczak-Roesch, M., Anderson, D., Glasson, B., Boucher, M., et al. (2018). What is Online Citizen Science Anyway? An Educational Perspective. arXiv [Preprint]. arXiv:1805.00441.

