

small teaching online applying learning science in online classes

Small teaching online applying learning science in online classes is an innovative approach that seeks to harness the principles of learning science to enhance the effectiveness of online education. As education increasingly shifts to digital platforms, understanding how students learn best has become essential for educators looking to foster engagement and retention in virtual environments. This article will explore the concept of small teaching, the key principles of learning science, and practical strategies for applying these principles in online classrooms.

Understanding Small Teaching

Small teaching refers to the idea that making small, incremental changes in teaching practices can lead to significant improvements in student learning. This concept is rooted in the understanding that learning is a complex process influenced by various factors, such as motivation, cognitive load, and feedback. In an online setting, small teaching can be particularly effective due to the flexibility and accessibility of digital platforms.

Key Elements of Small Teaching

1. **Incremental Changes:** Small teaching emphasizes that educators do not need to overhaul their entire curriculum. Instead, they can implement minor adjustments that can have a substantial impact on learning outcomes.
2. **Active Engagement:** To foster deeper understanding, small teaching encourages interactive elements, such as discussions, peer reviews, and collaborative projects.
3. **Feedback Loops:** Regular and constructive feedback helps students identify areas for improvement and reinforces their learning.
4. **Focused Learning Goals:** Clearly defined objectives guide students in understanding what they are expected to achieve, enhancing focus and motivation.

The Role of Learning Science in Online Education

Learning science encompasses the study of how people learn and the best

practices for teaching based on empirical research. In the context of online education, applying learning science is crucial to optimize student engagement and retention.

Core Principles of Learning Science

1. **Cognitive Load Theory:** This principle suggests that learners can only process a limited amount of information at once. Effective online courses should aim to minimize extraneous cognitive load, allowing students to focus on essential content.
2. **Spacing Effect:** Spacing out learning over time (distributed practice) is more effective than cramming. Online classes can incorporate this principle by scheduling content reviews and assessments over several weeks.
3. **Retrieval Practice:** Regularly recalling information strengthens memory retention. Online quizzes, flashcards, and discussion prompts can serve as tools for retrieval practice.
4. **Constructivism:** Learning is most effective when students actively construct their own understanding. Online platforms can facilitate constructivist approaches through collaborative projects and problem-based learning activities.

Practical Strategies for Small Teaching in Online Classes

To effectively implement small teaching strategies grounded in learning science, educators can adopt a variety of practices tailored to the online learning environment.

1. Create Bite-Sized Content

Instead of lengthy lectures, break down content into smaller, manageable units. This can be achieved through:

- **Short Videos:** Create 5-10 minute video lectures that focus on specific concepts.
- **Micro-Assignments:** Use brief tasks that encourage students to apply what they've learned immediately.

2. Foster a Community of Learners

Building a sense of community is vital in an online class. Strategies to achieve this include:

- Discussion Boards: Encourage students to post questions and interact with their peers.
- Group Projects: Assign collaborative tasks where students must work together to solve problems.

3. Use Formative Assessments

Formative assessments provide ongoing feedback to both students and instructors. Implement these practices:

- Quizzes: Use low-stakes quizzes to gauge understanding and retention.
- Peer Reviews: Have students critique each other's work, fostering collaboration and critical thinking.

4. Implement Scaffolding Techniques

Scaffolding involves providing structure and support that helps students build on their existing knowledge. Strategies include:

- Guided Notes: Offer outlines or templates that students can fill in during lectures.
- Step-by-Step Instructions: Break complex tasks into smaller, more manageable steps.

5. Encourage Self-Reflection

Self-reflection helps students evaluate their understanding and identify areas for improvement. Encourage this through:

- Reflection Journals: Ask students to maintain journals where they reflect on their learning experiences.
- Goal Setting: Have students set personal learning goals and periodically assess their progress.

Challenges in Implementing Small Teaching

Online

While small teaching and learning science provide a robust framework for online education, several challenges can arise:

1. Technological Barriers

Not all students have equal access to technology or the internet. This can create disparities in learning opportunities. Educators should consider:

- Offering alternative formats for content (e.g., downloadable resources).
- Providing tech support and resources for students who may struggle with online tools.

2. Student Motivation and Engagement

Maintaining student motivation can be challenging in an online setting. Strategies to combat disengagement include:

- Incorporating gamification elements to make learning fun and competitive.
- Regularly checking in with students to provide encouragement and support.

3. Assessment and Feedback Challenges

Providing timely and constructive feedback can be difficult in an online environment. Educators should:

- Set clear expectations for feedback timelines.
- Use automated grading tools where appropriate to streamline assessment.

Conclusion

Small teaching online applying learning science in online classes offers a promising pathway for enhancing student learning in a digital landscape. By making incremental changes informed by research on how people learn, educators can create more engaging, effective, and supportive online learning environments. Implementing strategies such as bite-sized content, community-building, formative assessments, and scaffolding can significantly improve student outcomes. While challenges exist, the potential for creating impactful online education experiences is immense. As educators continue to adapt and innovate, the integration of small teaching and learning science will play a crucial role in shaping the future of online education.

Frequently Asked Questions

What is small teaching and how does it apply to online education?

Small teaching refers to the practice of making small, incremental changes to teaching methods that can have a significant impact on student learning. In online education, this can involve quick adjustments to course design, such as modifying assignments or integrating interactive elements, to enhance engagement and understanding.

How can learning science principles improve online class design?

Learning science principles, such as spaced repetition and active learning, can improve online class design by creating more effective learning experiences. For instance, incorporating quizzes that encourage retrieval practice can help reinforce knowledge and improve retention among students.

What are some effective small teaching strategies for online classes?

Effective small teaching strategies for online classes include using formative assessments, providing timely feedback, incorporating multimedia resources, and fostering collaborative activities through discussion boards or group projects to enhance interaction and engagement.

How can instructors assess the effectiveness of small teaching changes in online classes?

Instructors can assess the effectiveness of small teaching changes by collecting student feedback through surveys, analyzing performance data on assessments, and observing engagement levels in discussions and activities to determine if the changes positively impact learning outcomes.

What role does student feedback play in small teaching for online courses?

Student feedback is crucial in small teaching as it provides insights into what works and what doesn't in the online learning environment. Instructors can use this feedback to make informed adjustments to their teaching strategies, ensuring that they meet students' needs and enhance their learning experience.

How can online educators create a sense of community using small teaching techniques?

Online educators can create a sense of community by implementing small teaching techniques like icebreaker activities, regular check-ins, and collaborative projects. These strategies encourage interaction and build relationships among students, fostering a supportive learning environment.

What challenges do instructors face when implementing small teaching in online settings?

Instructors may face challenges such as limited student engagement, technical issues with online platforms, and the difficulty of fostering personal connections in a virtual environment. Overcoming these challenges requires creativity, adaptability, and a focus on student-centered approaches.

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