PEDAGOGICAL FRAMEWORKS FOR INTEGRATING COMPUTER-BASED TECHNOLOGY IN ENGLISH CLASSES

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Abstract:
This article explores pedagogical frameworks for integrating computer-based technology (CBT) in English classes. It reviews the literature on CBT integration and identifies three main pedagogical frameworks: behaviorist, cognitive, and constructivist. The article discusses the strengths and weaknesses of each framework and provides examples of how they can be used to design and implement effective CBT-based English language instruction.

Introduction:
TPACK, SAMR, Community of Inquiry framework, UDL, flipped classroom method, inquiry-based learning, project-based learning.

The integration of computer-based technology (CBT) in English language teaching has become increasingly widespread in recent years. CBT offers a range of potential benefits for language learners, including increased motivation, improved language skills, and enhanced cultural understanding. However, the effectiveness of CBT integration depends on the pedagogical framework that is used to guide its implementation.

Literature Review
Pedagogical frameworks provide a structured approach to integrating computer-based technology in English classes, guiding educators in designing effective learning experiences that leverage digital tools and resources. Here are some key pedagogical frameworks for integrating technology in English language instruction:

1. TPACK Framework: Description: The Technological Pedagogical Content Knowledge (TPACK) framework emphasizes the integration of technology, pedagogy, and content knowledge to enhance teaching and learning.
Researchers have stressed the importance of effective use of technology in scientific teaching and learning. Through the use of technology, students' scientific investigations and reasoning can be constructively developed and help students connect constructed knowledge to practical work. Students indicate higher interests in learning strategies related to computers. Additionally, the utilization of technology can help improve teachers' attitudes, confidence, and instructional applications, help

teachers reflect upon scientific explanations and examples generated in their teaching (La Velle et al., 2003), and understand scientific concepts and creativity. On the contrary, lack of the knowledge about utilizing technology can limit the effectiveness of integrating technology into teaching. Therefore, teachers' knowledge to integrate content, pedagogy and technology has become important.

2. SAMR Model: Description: The Substitution, Augmentation, Modification, Redefinition (SAMR) model provides a framework for evaluating the level of technology integration in teaching and learning activities. In English classes, educators can use the SAMR model to assess how technology is being used to enhance language instruction. Substitution involves using technology as a direct substitute for traditional teaching methods, such as using word processing software instead of paper and pencil. Transformational learning activities that are truly personalized, situated, and connected through the use of a mobile device will go beyond merely using a mobile device as a substitute for more traditional tools. The SAMR model provides a framework that can be used to classify and evaluate learning activities. Ruben R. Puentedura developed the SAMR model in 2006 as part of his work with the Maine Learning Technologies Initiative. The model was intended to encourage educators to significantly enhance the quality of education provided via technology in the state of Maine. The SAMR Model consists of the following four classifications of technology use for learning activities:
• Substitution: The technology provides a substitute for other learning activities without functional change.
• Augmentation: The technology provides a substitute for other learning activities but with functional improvements.
• Modification: The technology allows the learning activity to be redesigned.
• Redefinition: The technology allows for the creation of tasks that could not have been done without the use of the technology.

3. Community of Inquiry Framework: Description: The Community of Inquiry (CoI) framework focuses on the importance of social, cognitive, and teaching presence in online learning environments. In English classes, educators can apply the CoI framework to promote active engagement, critical thinking, and collaborative learning among students. Social presence involves building a sense of community and connectedness through online discussions, group activities, and collaborative projects. The CoI framework (Garrison, Anderson & Archer, 2000) is a process model of online learning. It assumes that effective online learning, especially higher order learning, requires the Community of Inquiry Framework 5 development of community, and that such development is not a trivial challenge in the online environment. The CoI framework is a dynamic model of the necessary core elements for both the development of community and the pursuit of inquiry, in any educational environment. Its three core elements -- cognitive, social and teaching presence – described in the sections which follow, are viewed as multidimensional and interdependent.

4. Universal Design for Learning (UDL): Description: Universal Design for Learning (UDL) is a framework for designing inclusive learning environments that accommodate the diverse needs of all learners. In English classes, educators can apply the principles of UDL to create flexible, customizable learning experiences that address learners' variability in language proficiency, learning styles, and abilities. UDL encourages educators to provide multiple means of representation, engagement, and expression through the use of technology. For example, educators can provide multimedia materials, interactive activities, and varied assessment options to accommodate diverse learners' needs and preferences. By applying the principles of UDL, educators can ensure that all students have equitable access to high-quality English instruction and opportunities for language learning success.

5. Flipped classroom model: The flipped classroom model involves students engaging with content outside of class through technology, such as watching videos or reading articles, and then using class time for activities that reinforce and deepen their understanding. English teachers can use this model to facilitate more interactive and collaborative learning experiences for their students.
Flipped learning class can also be combined with notion mapping-based mode, which can upgrade the critical thinking capability of EFL learners through visualizing map, hoist English course learning scores (mainly in Speaking and Listening), and alleviate inquietude in oral English expression. In this type of flipped class, the technology-supported concept map is integrated to link the concepts of knowledge points in the course, which further strengthens the cultivation of students' cognitive ability. Concept map combines concept mapping theory and exerts the power of computer science and technology to explicate complicated concept relationships for students. English has become more and more exceedingly significant in the world, and the number of people learning and using English is the largest even gigantic in the world. English also plays a seminal role in the field of second language acquisition. Restricted by personality and practice time, oral English is usually tough to master, and users usually have miscellaneous degrees of oral anxiety.

6. Inquiry-based learning: Inquiry-based learning encourages students to explore topics of interest through research, critical thinking, and problem-solving. Technology can support this approach by providing students with access to a wealth of resources, tools for collaboration, and opportunities for authentic engagement with real-world issues.
One of the key principles of inquiry-based learning is student agency, allowing learners to pursue their interests, ask meaningful questions, and drive their own learning. Teachers play a facilitative role, guiding students through the inquiry process, providing resources and support, and fostering a collaborative learning environment. Inquiry-based learning promotes deeper understanding and retention of knowledge as students are motivated by their own curiosity and actively engaged in the learning process.
Inquiry-based learning can take many forms, such as project-based learning, problem-based learning, and experiential learning. It is often interdisciplinary, integrating multiple subject areas and promoting connections between different areas of knowledge. By encouraging students to explore and inquire,

inquiry-based learning promotes critical thinking skills, creativity, and a deeper understanding of complex concepts.

Overall, inquiry-based learning empowers students to become lifelong learners, critical thinkers, and problem-solvers. It fosters a love for learning and encourages students to take ownership of their education, preparing them for success in an increasingly complex and dynamic world.

7. Project-based learning: Project-based learning tasks students with completing a complex, real-world project that requires them to apply content knowledge and skills in a meaningful way. Technology can support this approach by providing students with tools for research, communication, collaboration, and presentation.

Project-based learning (PBL) is an instructional approach that emphasizes hands-on learning through the completion of real-world projects or tasks. In PBL, students engage in a sustained, complex project that requires them to investigate, research, problem-solve, and create a product or solution. This approach allows students to apply knowledge and skills from multiple disciplines in a meaningful context, promoting deeper learning and understanding.

Overall, project-based learning provides a dynamic and engaging learning experience that prepares students for success in the 21st century by fostering skills and competencies needed in today's complex and rapidly changing world.

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