Why Should Technology be Integrated into the Curriculum?

WebQuest Description: This Professional Development workshop is designed to show teachers how to create meaningful learning in the classroom using technology integration best practice strategies.
Grade Level: 9-12
Curriculum: Technology
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Introduction

ResearchProposalThepurpose of this research proposal is designed to show teachers how they cancreate meaningful learning experiences in the classroom by integratingtechnology into the curriculum through the use of various technological tools,resources, and devices in order to provide students with a deeper understandingof the content. Technology Integrationchanges teacher perceptions by offering effective ways to reach different typesof learners, assess student understanding of skills and standards, and throughimproving student learning outcomes by providing a rich, rigorous, and relevantcurriculum.Therationale for integrating technology into the curriculum is to provide studentswith a rich and deeper understanding of the content. Teachers will utilize project-based learningskills, tools and resources to successfully integrate technology by employing21st Century skills and practices.Theresearch base for this proposal will consider several examples of teachers creatingmeaningful learning experiences in the classroom by integrating technology intotheir curriculum.   It will examine fourkey components of learning: active engagement, participation in groups,frequent interaction feedback, and connections to real-world experiences. The research will also explore the rolereversal involved when technology is successfully integrated into thecurriculum. The projected application tools, resources, and devices will offer a transformative approach to learning that will create a deeper understanding of the content.   Theprojected outcome for integrating technology will show teachers how they cancreate meaningful learning experiences in the classroom by integratingtechnology into the curriculum through the use of various technological tools,resources, and devices. Technologyintegration allows teachers to serve as guides and facilitators, helps studentsto take responsibility for their learning, provide economically disadvantagestudents the opportunity to explore a rich and meaning learning experience inthe classroom. Technology integrationpromotes student achievement and performance in the classroom, higher-orderthinking skills, and prepares students for 21st Century skills andpractices.

Tasks

AnnotatedBibliographyAhmet, B., Bulent, T.,& Cemalettin, A. (2011).Experiencing Technology Integration in Education. International Electronic Journal ofElementary Education, Vol, 3 Issue. 2, p.139-151.The purpose of thisstudy was to explore the experiences of six children using technology toenhance their learning at home and at school. Data was collected through interviews, classroom observation, and homeobservation. The results proved thatstudent have common perception toward their experience with technologyintegration at home than at school. Thestudy showed that few children who integrate technology for learning had highlyinvolved parents who helped choose appropriate software, coached their child onthe computers, worked jointly with the child at the keyboard, and offeredpraise. Christensen, R.(2002). Effects of TechnologyIntegration Education on the Attitudes of Teachers and Students. Journal of Research on Technology inEducation. p. 411-433.This article introduces the idea of needs-based technology integrationand how it is shown to have a rapid, positive effect on teacher attitudes. This type of education is shown to have atime-lagged positive effect on the attitudes of student as well. The amount ofconfidence a teacher possesses in using computers and related informationtechnologies (often referred to as simply “technology”) may greatly influencehis or her effective implementation of technology methods in the classroom.Positive teacher attitudes toward computers are widely recognized as a necessarycondition for effective use of information technology in the classroom.Cradler, J. (1994).Implementing Technology in Education: Recent Findings from Research and   Evaluation Studies. San Francisco, CA: Far West Laboratory forEducational Research andDevelopment.The article emphasizedthe involvement of educators in the development of individualized instructionalapplication of technology as part of the overall school level planningprocess. It ensured that local insertionof technology is driven by the curriculum and instructional needs of the schoolsite. The author’s recommendationincluded the implementation of technology on a comprehensive planning thatinvolved all of the stakeholders. The plan also emphasized that school anddistrict plans can only be implemented if teachers are developing andimplementing classroom plans or projects that directly support the objectivesand the school and district technology plans. Erekson, T., &Shumway, S. (2006). Integrating the Study of Technology into the Curriculum: A Consulting Teacher Model. Journal of Technology Education, Vol. 18No.1, p. 27-38.This article focuses onthe barriers teachers faced with technology integration. Teachers trained to teach a discipline becomethreatened when other impinge on their subject area. Teachers faced feelings of inadequacy whenfaced with the idea of straying from the traditional method of teaching toembracing the idea of integrating technology into their curriculum.Glazer, E, Hannafin,M., & Song, L. (2005). PromotingTechnology Integration through   CollaborativeApprenticeship. Educational TechnologyResearch and Development, Vol.53No. 4, p. 57-67.This articlefocuses on the Collaborative Apprenticeship framework which features severalimportant similarities to and distinctions from cognitive apprenticeship. As with cognitive apprenticeships,experienced teachers mentor their less experienced peers, modeling,scaffolding, and coaching until they become autonomous in the design,development, and implementation of key practices. Jacobsen, M.,Clifford, P., & Friesen, S. (2002). Preparing teachers for TechnologyIntegration: Creating a culture ofinquiry in the context of use. ContemporaryIssues in Technology and TeacherEducation, 2(3), 363-388.In September of2000, teachers in the province of Alberta, Canada, began the three-

yearimplementation process for an Information and Communications Technology (ICT)Program of Studies with K-12 Students. This innovative curriculum, demanded theeffective infusion of technology for communicating, inquiring, problem-solvingand decision-making in core curriculum which placed Alberta, Canada at theforefront in terms of what it means for students to think and learn with thefull range of digital technologies that are so much a part of today's changed andchanging world.Lei. J., & Morrow,B. (2010). Teachers' Adoption of Technology Innovation into Pedagogical Practices. Educational Information Technology, Vol. 15, p. 143-153.This article provides anumber of strategies that are essential to the effectiveness of the incentiveproject. The Incentive Project involvesteachers in the decision-making process to make the technology integrationproject meaningful, helping teacher to develop a well designed plan withrealistic goals and a feasible implementation outline, building a collegialcommunity from where teachers can learn from peers, leading with strongleadership to ensure high morale, sufficient resources and support that areindispensible to the successful implementation of a technology project andproving timely support to help teachers remove roadblocks. Robertson, B. (2000). Integrating Technology intoInstruction. Information Today Inc.The article focuses onthe utilization of the five phased approach planning, research, development,refinement and implementation. Theplanning phase defines the current knowledge base to develop the foundation forthe organization of learning. TheResearch allows the learner to explore the content area and to deepen theirknowledge base. The Development phaseprovides the learner with opportunity to construct their knowledge followingthe curriculum materials and scope and sequence of the instruction. The Refinement phase furthers the developmentand leads the learner to the implementation phase and finally theimplementation phase demonstrate the learning that has taken place through eachphases. Woodbridge, J. (2004).Technology Integration as a Transforming Teaching Strategy. Dissertation. Minneapolis, MN: Walden University. Retrieved from http://www.techlearning.com/article/technology-integration-as-a-transforming-teaching-strategy/41670This study oftechnology integration in the classroom involved 42 observations in 16classrooms, 20 interviews, and 27 responses to an online survey. Teachers were selected with a common educationalbackground in integrated learning and technological knowledge. The results revealed that technologyintegration varied according to individual teaching beliefs, perceptionstowards technology innovations, and how the teacher practiced and put technologyto work in the classroom.

Process

How to Create Meaningful Learning in the Classroom using Technology?I.   What is Technology Integration?1.   Using computers effectively and efficiently to introduce, reinforce, enrich, and assess student mastery of curricular content.2.   The use of software and other technological device to support real-world applications so that students can gain a better understanding of how to use the computer   purposefully and creatively.3.   Technology Integration is also an instructional focus that includes: teacher collaboration, planning, and teacher participation.II.   Technology Integration Best Practices1.   Best practices is referred to as effective instruction that is applied to practical and relevant teaching strategies that are research based and have been proven to work in the classroom.2.   The Constructivism Approach allows students to construct knowledge by examining, exploring, explaining, and creating their own knowledge.3.   Differentiating instruction is another key strategy teacher's can use to develop a diverse curriculum that better serves the needs of all learners.III.   Student Perception1.   Student perception explores how children define and use technology in the classroom.2.   Student view technology as a motivate tool that makes their life easier and learning effortless. IV.   Teacher Perception 1.   Teachers view technology as an instructional tool for delivering the subject matter more efficiently and effectively.2.   Technology integration involves understanding teacher's motivation, perceptions, and beliefs about how technology is used to support student learning in the classroom, and curriculum goals.V.   Biblical Integration1.   How is technology integration viewed in the moral context?2.   The importance of instituting a common balance in the use of technology.VI.   Conclusion

Evaluation

Category and Score					Score
				Total Score	

Conclusion

Teacher Page

Standards

Credits

Other