Edvation
Advancing education for 21st century success.

Grant Writing and Budget Justification

Edvation's instructional materials and professional development products are used by school districts to integrate technology and 21st Century skills with core curriculum to enhance student achievement. Edvation understands that funding for your technology goals may be provided by grants from sources such as state, federal, private, nonprofit, and corporate agencies. Many districts have successfully secured funding for Edvation's suite of products and services by incorporating Edvation into their technology or school improvement plans, and by including Edvation within grant proposals.

This document will aid you in the grant writing process by demonstrating how Edvation can support your identified goals and become a part of your technology integration proposal. It also references other documents (available from Edvation) that contain additional content that you can use within your proposal.

Common Components of a Grant Application

Information desired by grant applications or RFPs (Request for Proposals) will vary depending on the organization. However, there are common components:

Executive Summary/Abstract

- May include concisely stated goals, objectives, statement of need and expected outcomes

Project Description

- Needs Statement
  - Data driven statements
  - What need are you addressing? Who will benefit from this project?
- Goals and Objectives

Develop Clear Project Goals

If your goals have to do with **technology integration**, then you should assess your current use of software and hardware including how it is used in classrooms at each grade level and content area.

Guiding Questions

- Do teachers know how to use technology with their curriculum?
- Are teachers personally proficient in technology skills?
- Does the current professional development focus on using technology to increase content knowledge and advance professional learning?
- Are teachers involved in planning their own professional development?
- How will you integrate technology effectively into the curriculum and instruction, based on relevant research which will lead to an increase in student achievement?
- What are your goals for using technology to improve student achievement?
- How are those goals aligned with content and standards?
- How will technology be used to enhance the teaching and learning process?

Action Plan
- Activities and strategies that will meet the needs you have described
- Timeline of activities with milestones and target dates

> What strategies will you use to help teachers integrate technology effectively into the curriculum and instruction?

Budget
- Project costs and rationales
- List other types of support

Evaluation
- How will you measure success?
- Include types of data and how/when it will be collected
- Include process to be used and how it will be reported

> When your technology integration grant is funded, you will be accountable for measuring its success. Describe the process and accountability measures that you will use to evaluate the activities funded under the program.
>
> – How effective were the activities in integrating technology into curriculum and instruction?
> – Did they increase the ability of teachers to effectively teach and lead students to reach state academic standards?

Sustainability Plan
- What will you do to ensure that the program funded by the grant remains an ongoing and sustained program?

Additional Information
- Mission and vision statements
- Past successes
- Partners
- Dissemination Plan
- Personnel Responsibilities and Qualifications

> For example, in an application for an EdTech grant, you may be asked to elaborate on the following areas:
>
> - **Promotion of curricula and teaching strategies that integrate technology**
>
> Provide a description of how the applicant will identify and promote curricula and teaching strategies that integrate technology effectively into curricula and instruction, based on a review of relevant research and leading to improvements in student academic achievement.
>
> - **Professional development**
>
> Include a description of how the applicant will provide ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel to further the effective use of technology in the classroom or library media center.
>
> (Information based on the document, *Guidance on the Enhancing Education through Technology (Ed Tech) Program*, U.S. Department of Education, 2002, http://www.ed.gov/programs/edtech/guidance.doc)

Edvation Product: TechSteps

Product Description

Technology Literacy Curriculum: TechSteps is a developmental K-8 technology literacy curriculum. It includes 6 technology integration activities at each grade level. The activities are designed to help teachers integrate technology into the curriculum to simultaneously develop tech literacy skills and to improve student learning and achievement in core content areas. As students participate in the activities, using technology to think, and learn, and develop products, they evidence a wide range of technology skills and 21st century skills.

> **About the activities**: The TechSteps activities are written by professional instructional designers who have K12 teaching experience, and are based on activities that have been proven successful in classrooms. Each TechSteps learning activity is presented as an electronic book. These books are called 'activBooks' because in addition to containing text and graphics, they contain interactive elements and digital resources, providing what's needed to address the learning task presented. Each TechSteps activBook conforms to a strict pedagogical design methodology that is broadly constructivist in philosophy, and focuses on creating open-ended learning experiences. The activities are governed by rigorous technical design and presentation standards. TechSteps is easily deployed on a school LAN, district WAN or statewide portal.

Technology Literacy Assessment and Reporting: Rubrics, tied to a robust set of technology literacy standards , allow teachers to give feedback to students about the attainment of 21st century skills – including technolgy skills. If they wish, districts may also implement the techAttain component of the produt that maintains a **technology literacy profile** for each student over a number of years. The profile draws evidence from the rubrics to show a student's overall progress towards tech literacy in two benchmark years – grades 5 and 8. Reporting options allow administrators to monitor technology literacy development across a school, district, or state.

Curriculum Mapping

In the interests of true integration, districts are encouraged to modify the content of TechSteps activities to meet local curriculum needs. Models of Integration are provided on the Web site to show how this might be done.

State Standards Mapping

Tech Literacy Standards: TechSteps Technology Literacy Framework is underpinned by the National Educational Technology Standards for Students (NETS*S) and by guidance provided by other national bodies e.g., the Partnership for 21st Century Learning. Students are assessed according to their ability to demonstrate skills within the six NETS*S categories.

Content Standards: Each TechSteps activBook is also correlated to state content standards. Only standards that are inherent to the activity are mapped. If an activity has been modified to address local content standards, district planners will complete the standards mapping accordingly.

For students TechSteps is designed to:

- Build information, technology, and media literacy in a variety of curriculum areas
- Focus on the application of 21st Century technology skills in meaningful contexts
- Promote higher-order thinking, creativity, and intellectual curiosity
- Scaffold effective uses of technology
- Provide guidance and feedback concerning the attainment of tech literacy

For teachers TechSteps is designed to:

- Provide job-embedded professional development
- Serve as models of technology integration
- Support the learner-centered / constructivist classroom
- Provide product design and content that is research-based

- Provide rubrics that can be used to guide and assess tech literacy development
- Provide the mechanism to report progress towards tech literacy

Edvation Product: pd21

Product Description

pd21 is a complete professional development solution for school districts that are focused on technology integration, 21st century learning, and best practices. Through pd21, Edvation provides district and school administrators and teachers with tools and content they can use to support their transformative school improvement and systemic change initiatives. Providing both for teachers' needs - with excellent content, planning and learning facilities, and the needs of administrators - with comprehensive management and reporting tools, pd21 is the most innovative ongoing professional development system available today. Edvation's professional development activities will support your goals for improved student achievement and school reform in areas of integration and technology literacy.

Edvation is a professional development affiliate of the Partnership for 21st Century Skills which supports the integration of 21st century skills into all aspects of teaching and learning.

Teacher Features

On entering pd21, a teacher is taken immediately to his or her own personal *professional development desktop* from which everything is within easy reach. From here, a teacher may add *Self-paced Learning Books, Anytime Workshops*, or *Instructor-led Classes* to their *To Do* list. Designed for engaging adult learners, pd21 includes:

- **A Professional Development Achievement Plan**
  Teachers assess their learning and manage their accomplishments as part of individual, school, or district wide goals. Optional focus goals can be chosen from NETS*T or from a bank provided by the school, district or state.

- **A My Resources List**
  Teachers can save completed activities to modify and use later with their students. This area serves as a connection between the teacher's own experiences as a 21st century learner and the practical use of the activities in the classroom with their own students.

- **Self-paced Technology Skills Books for Educators**
  These books are focused on a particular technique providing 'how-to' tips and ideas for classroom application. They are designed to guide teachers in developing introductory and intermediate application skills in a K-12 education context.

- **Self-paced Technology Integration Models for Educators**
  Technology integration principles based on Edvation's extensive research are modeled in these books. The activities weave together new technology skills and curriculum concepts in English language arts, mathematics, science, and social studies for Elementary/Primary, Middle School, and High School teachers.

- **Anytime Technology Integration Workshops**
  Each pd21 workshop requires approximately five hours. Long enough to learn new skills, integration techniques and principles, but compact so that it will fit within a busy schedule. Teachers finish the workshop with a collection of new ideas that they can take immediately into the classroom.

- **Instructor-led Technology Integration Classes**
  Teachers may also choose to join an Instructor-led Class and work through the workshop elements within a set time frame. Teachers have the option to submit for a certificate of completion, continuing education credit, or clock hours. During an Instructor-led workshop, we encourage interaction with the instructor and colleagues via a threaded discussion forum and email.

For teachers pd21 is designed to:

- Serve as ongoing professional development solution that builds and extends a professional learning community
- Guide their development of technology skills, technology integration skills, and their ability to integrate technology into standards-based lessons
- Provide flexible PD that facilitates a range of learning needs, time requirements, and abilities

Administrator Features

pd21 provides education leaders with a straightforward way to disseminate systemic goals, provide for teachers' diverse learning needs, and track their progress. pd21 was designed from the ground up to not only deliver excellent learning for teachers, but to also be an enterprise solution that district administrators, principals, professional development coordinators, technology coordinators and other leaders can use to manage ongoing, systemic professional learning.

pd21 delivers a balance of existing content and ongoing workshops alongside messaging and configuration options that allow it to stand alone, or become the core, cost-effective component of any comprehensive professional development strategy. pd21's unique configuration options enable an education system (state or district) to associate account holders (teachers) with multiple sub-entities (often schools). System administrators can then deploy objectives and action items through these channels, and can aggregate progress reports within and across their entities. In this era of accountability, pd21 facilitates not only the establishment of a community of professional learners, but also a way to measure a return on investment.

For administrators pd21 is designed to:

- Support district or school-wide systemic change
- Empower district and school-based technology integration leaders - coordinators, curriculum leaders, and principals, with the tools they need to bring all teachers 'on board'
- Support a flexible and professional learning culture: moving teachers from basic technology skills and subject-specific integration, to generalizing technology integration principles, to independence and leadership
- Provide a complete set of configuration options, and management and reporting tools
- Allow progress (individual or aggregated) to be monitored so that administrators can provide additional guidance and measure effectiveness

> *"Classroom teachers, library media teachers, administrators, and technical support staff should receive technology training and use it to promote student achievement. Businesses consider such training a part of the total cost of ownership; without the training, the equipment is as useless as it would be without electricity. A rule of thumb in the business community is that the amount of resources committed to staff development should be approximately the same as the amount of resources committed to the acquisition of new equipment. School districts should consider adopting this rule as well."*
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> Commission on Technology in Learning, Education Technology Planning: A Guide for School Districts.

Edvation Research Base:
Research on Learning and Research on Technology and Learning

It will be important in your grant application to show that your project proposal addresses a significant need. You will use data and research to address that need and support your project idea. As part of your grant application, you will want to show that Edvation products are research-based, support your goals both theoretically and practically, and will therefore help you to achieve those goals. Look through these Edvation Research-to-Practice strategies and match them to your own project goals.

Research on Learning

Research shows that when certain 'qualities' are part of the learning experience, there are clear benefits to students - such as increased comprehension and deeper conceptual understandings - which in turn lead to measurable improvements in academic achievement as may be shown by increased test scores. Edvation identifies and labels these qualities and aligns them with instructional strategies that can bring these qualities into the learning experience. Edvation's instructional design is built upon these research-proven instructional strategies.

Research On Learning 1: On Learning and Context

Research Finding

When tasks are based within a relevant context, student problem- solving strategies are more effective and comprehension is increased.

From Research to Practice

Edvation recognizes that knowledge consists of items that exist in relation to each other, rather than independently. Activities are structured to employ a meaningful context that reflects the way knowledge will be used in real life. A number of pedagogical strategies emphasize the use of relevant context in student tasks. These strategies include conducting interviews and surveys, creating realistic models and simulations, working with primary sources and case studies, and providing authentic problem-solving situations. The instructional design of Edvation content incorporates these strategies where they will add value to the learning experience.

Research On Learning 2: On Learning and Collaboration

Research Finding

Student understanding is increased when students are given opportunities to collaborate with others.

From Research to Practice

Pedagogical strategies such as forming learning groups with defined roles, allowing student-led class discussions, encouraging peer tutoring and assessment, participating in cooperative games, and using the Internet as a form of interaction with others promote collaboration among students. Edvation activities are flexible and open-ended; thereby allowing teachers to have students use the resources as they act collaboratively and / or in organized co-operative groups. Most of the tasks, for example, require that students build their own information products as they construct knowledge and demonstrate their understandings. These tasks can easily be presented as team projects. Other Edvation content incorporates collaborative learning in more explicit ways such as teacher tips suggesting how the task can be presented as group work; activities where group work - including discussion and collaboration - is an integral part of the lesson; activities where students are required to play different roles; and activities that require students to interact with, and collect data from others (perhaps using the Internet).

Research On Learning 3: On Learning and Prior Knowledge

Research Finding

By activating and building on prior experiences, students' comprehension is improved.

From Research to Practice

A number of pedagogical strategies have been shown to activate students' prior knowledge. These include conducting meaningful class discussions and brainstorming sessions, using graphic organizers and concept maps, encouraging the use of learning logs, and allowing reflection time. With these as a basis, Edvation recognizes that learners build upon prior knowledge and create relationships between items of knowledge that form personal understandings of the world. Edvation products encourage active learning by using design techniques like providing reflection opportunities and posing discussion questions before, during, and after the activity. Edvation activities allow teachers to not only connect information from past to present learning in a way that is meaningful for students, but to also inform them about possible student misconceptions so appropriate points of entry can be determined for new topics that build on what students already know.

Research on Learning 4: On Learning and Reflection

Research Finding

Incorporating reflection into the learning process leads to increased conceptual understanding.

From Research to Practice

Edvation utilizes a number of pedagogical strategies that have been shown to promote student reflection. These include: using journals and learning logs, conducting class discussions, allowing for personal learning styles and encouraging peer sharing. Depending on lesson content, reflection can be designed into learning experiences through instructional techniques such as prompting learners to: ask questions, examine their own methodologies, discuss their thoughts with peers, or reflect upon completed activities. Structuring Edvation products to encourage student reflection allows learners to stand back and take time to consider what they know and what they are learning in order to form new mental models and understandings.

Research on Learning 5: On Learning and Scaffolds

Research Finding

The use of instructional scaffolds increases student comprehension of tasks and enables students to assume responsibility for skills in future learning.

From Research to Practice

Pedagogical strategies supporting the use of scaffolds in the classroom such as modeling or demonstrating by a teacher or peer, structuring guided practice, utilizing templates and graphic organizers, allowing peer tutoring, and supporting an apprenticeship learning model are considered in the instructional design of Edvation activities. Edvation knows that students need to be guided and supported, but not in such a way that makes a task automatic. Before designing an activity, Edvation designers identify the project's components so areas where learners may have difficulties can be identified. In doing this, scaffolding strategies can be determined that will address the different areas of concern. Well-sequenced content, materials, and tasks - along with teacher and peer support - goes a long way towards helping students to become independent problem solvers, but Edvation also utilizes other design structures, such as templates and informative pop-ups.

Research On Learning 7: On Learning and Higher-Order Thinking

Research Finding

Comprehension is increased when students are presented with learning opportunities that require higher order thinking skills such as solving problems, making decisions and analyzing data.

From Research to Practice

The design of the Edvation activities encourages a classroom shift away from memorizing facts to helping students to deal with ideas and acquire personal knowledge. Edvation activities provide a learning environment that promotes higher-order thinking by using techniques such as: asking open questions, presenting issues that need to be explored, and requiring learners to make decisions and contributions. These techniques are based on pedagogical strategies that include utilizing open-ended problem-solving, requiring products from all levels of Bloom's Taxonomy, and varying questioning techniques and purposes.

Technology and Learning

A number of research studies have examined aspects of educational technology use that were found to result in measurable benefits to learners. Edvation aligns these aspects with both macro- and micro-instructional strategies.

Research on Technology and Learning 1: On Technology and Active Learning

Research Finding

Technology improves student performance by involving students actively in the learning process.

From Research to Practice

Edvation activities include a number of technology integration practices that lead students to active involvement in their own learning.

- **Web tools** that allow students to independently search for, and retrieve, information in multiple formats
- **Digital acquisition devices** (e.g., probeware, cameras) that allow students to gather raw, digital data ready for analysis
- **Communication tools** (e.g., email, networks, and video-conferencing) that allow students to work collaboratively in electronic communities to actively create knowledge and solve problems
- **Productivity tools** (e.g., spreadsheets, databases, and word processors) that allow students to work with information, quickly constructing knowledge through organization, manipulation, representation, and analysis of information / data
- **Authoring / Desktop-Publishing tools** that allow students to independently create professional products including traditional information products, multimedia products, and non-linear interactive products

Edvation activities pose challenges that are designed to be appealing and potentially rewarding to students so that they may become actively engaged in learning. As they work to fulfill the challenges posed, students use the tools described above to help them to develop their own products and solutions.

Research on Technology and Learning 2: On Technology and Higher-Order Thinking

Research Finding

"Technology can enable the development of critical thinking skills when students use technology presentation and communication tools to present, publish, and share results of projects" (CARET).

From Research to Practice

A number of technology integration practices encourage the use of higher-order thinking skills. Significant amongst these is the use of authoring / publishing tools in the design and development of complex products such as videos, multimedia presentations, and interactive, non-linear documents. The instructional design of Edvation content

incorporates authoring tools where they will add value to the learning experience. The development of a complex product requires that students involve themselves in higher-order thinking as they compose the text of the product, as they make decisions about which materials should be included to support their message, as they plan for the viewer's use of their product, and as they evaluate the effectiveness of their product. Questions are often included in the follow-up to Edvation activities that require higher-order thinking as students reflect on their learning experience.

Research on Technology and Learning 3: On Technology and Problem-Solving

Research Finding

"Technology can enable the development of higher order thinking skills when students are taught to apply the process of problem solving and are then allowed opportunities to apply technology in development of solutions" (CARET).

From Research to Practice

Edvation activities include the use of technology as a tool to manage information and to transform it into usable knowledge - knowledge that will help students to solve problems, inform decisions, or interpret information / text. Students are regularly involved in hypothesizing, planning, modifying, identifying patterns/sequences, comparing / contrasting, analyzing and evaluating. The instructional design of Edvation content incorporates productivity tools where they will add value to the learning experience.

Research on Technology and Learning 4: On Technology and Student Achievement

Research Finding

"Technology improves student performance when the application directly supports the curriculum objectives being assessed" (CARET).

From Research to Practice

edClass is a standards-based technology integration product. Based on research that suggests that students learn best when technology is designed to achieve specific educational objectives, edClass provides integration activities that teachers can use both in the classroom today, and as models of sound practice when designing their own lessons. The design process used to develop Edvation activities increases the potential for student achievement by beginning with learning objectives drawn from various state standards. The process then identifies ways in which technology might best support this learning so that an experience can be designed that will fulfill the educational objectives.

Research on Technology and Learning 5: On Technology and Student Attitudes

Research Finding

"Technology improves motivation, attitude, and interest when students use computer applications that adjust problems and tasks to maximize students' experience of success" (CARET).

From Research to Practice

The instructional design of Edvation content incorporates aspects of technology that have been identified as being motivating to students. To truly engage in a task, for example, students need to see it as legitimate or authentic. Technology increases student access to real-world tasks. Edvation's activities incorporate aspects of technology that have been identified as being motivating to students. Opportunities are given for students to be involved in meaningful, authentic tasks, to work cooperatively with other students, to have active control over their work, to receive feedback (through technologies that support peer or teacher review), to use tools for revision, to experience success, and to create professional products that are valued by today's public and / or academic community.

Research on Technology and Learning 6: On Technology Integration

Research Finding

"Technology improves student performance when the application is integrated into the typical instructional day" (CARET).

From Research to Practice

Edvation's activities are technology integration activities, designed to fit into a typical instructional day. They are curriculum-driven rather than technology-driven. While working through a Edvation activity, the guidance focuses students on the key curriculum concepts at hand. New technology skills are woven into this meaningful context so that students learn these skills as they are needed. Technology skills are not learned in isolation, but are learned as part of completing real world tasks that often involve a number of different skills.

Research on Technology and Learning 7: On Technology and Learner Productivity

Research Finding

By offloading routine tasks and memorization, technology partners with the learner to increase productivity.

From Research to Practice

Edvation's activities are designed to use the computer to amplify the learner's potential. In activities involving the use of data, for example, students use the computer as a tool to quickly gather, store, and chart data. These are routine tasks well suited to the computer's capabilities and may be performed much faster than was previously possible. Freed from these tasks, students can focus on analysis, interpretation, prediction, and experimentation.

Edvation Integration Principles

Edvation has its own proprietary Principles for Technology Integration. These are the principles that Edvation uses in its own instructional design processes. These principles succinctly frame aspects of technology that can be used to facilitate desired learning processes in the study of English language arts, mathematics, science, and social studies. If you would like to access these principles for use in a grant application, please contact us at *service@Edvation.com*.

For more detailed research evidence and the research bibliography, you may want to access the Edvation Research Base document. If you would like a copy or require any other assistance, please send an Email request to service@Edvation.com.

Resources

Commission on Technology in Learning. Education Technology Planning: A Guide for School Districts. Sacramento: California Department of Education, 2001. www.cde.ca.gov/ls/et

Gajda R. & Tulikangas R. Getting the Grant - How Educators can Write Winning Proposals and Manage Successful Projects. Alexandria: ASCD, 2005.