K-12
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A planning resource for personalizing learning

Planning a Proof of Concept

How do you start a POC? With a proper plan, of course!

With so much at stake—in terms of time, resources, and the quality of your students' education—taking the time to properly plan your proposed education technology programs before implementation is more important than ever. A Proof of Concept, or POC, is a great place to start. But how do you start a POC? With a proper plan, of course!

First, what is the value of your proposed education technology program? Is its value to students and teachers worth the investment of money and time? This is the power of the POC model. It allows you to "test drive" a concept before making a lasting commitment, to gauge value in a real-word trial and see if the technology tested is right for you and your students. This can save your district money, time, resources, and countless frustrations.

When contemplating a POC, the very first thing your school or district should do is to assemble a committee of stakeholders that includes teachers, administrators, and technology staff. Contacting vendors and sharing your needs and usage requirements is important as well. Attending seminars and workshops to gain a scope of knowledge can also help you to make more informed decisions.

Steps To Consider When Planning A Proof Of Concept

STEP 1: Statement of the Problem/Issue

This provides a base for the development and testing of an educational intervention and the need for the exploratory demonstration or test of feasibility. Describe the proposed program or concept and its intended impact. What, specifically, is the problem addressed? Conduct an assessment including how you would test the program approach against your traditional methodology at a selected school. The comparison should demonstrate the superior benefits of the new approach.

STEP 2: Stakeholders

Who is affected by the problem? Who would be involved in implementing the solution? Who else would need to be involved in terms of overseeing the solution or monitoring its success? Talk with the consultants, advisers, teachers, teaching assistants, parents, and children that are affected by the problem and would benefit from the solution.

STEP 3: Describe the Proof of Concept "Solution"

This should help in reporting the findings of any preliminary studies. Present the new POC model, and describes the intervention strategies linked to the model. Be sure to ask stakeholders what the desired outcomes of this program are? How will you get there? What will indicate progress toward these outcomes?

Provide a detailed description of the proposed solution as well as any relevant references. The solution should comprehensively address and solve each of the problems revealed during your initial assessment. Your POC should outline your initial pilot.

STEP 4: Practical Details of Proof of Concept Use

This digs deeper into the proposed strategies or interventions. A clearly defined concept is necessary in order to begin to characterize and classify the phenomena of interest.

Break down specifically how the team would tackle the POC:

- Context of Program
- Planning and Development Process
- Skills Needed (Are there people on your staff who could provide the necessary skills in your pilot? If not, what professional development would be necessary to get key stakeholders up to speed? Are there vendors that could provide the necessary services?)
- Funding Sources
- Tools and Other Resources

STEP 5: Practical Advantages of Proof of Concept "Solution"

This increases understanding of the mechanisms behind the proposed solution. This would include a review of various clarification methods, assumptions, and relevant case studies. Also include the following adoption considerations:

- Getting Started with this Innovation/Initiative
- Sustaining this Innovation/Initiative

STEP 6: Develop the Program and Technology Infrastructure

Request qualifications and proposals from qualified companies or organizations in which to partner with your school or district, to provide the information necessary to begin your POC. If the POC is successful, then you may use the POC to apply for grants or other available funding to develop and implement your program. Your school or district could also consider proposals from companies or organizations that have funding or grants available and would be interested in partnering with you, your school, or your district providing expert content knowledge in the areas of curricula, assessment, instruction, and predictive analytics for the project development. During the course of the POC, you will want to ascertain if students and staff are accessing information in an effective manner, as well as the best ways to manage devices within the classroom. A pilot provides the opportunity to learn about the management of apps, inventory, and procedures for distribution of devices. You'll also want to assess the infrastructure in all schools to be tested as well as all support personnel. This includes everything from maintenance, sustainability and connectivity to security, technical support, and initial training. After the POC, you'll need to measure whether support effectively and promptly addressed any technical issues that have occurred during the POC. If not, you'll want a clear idea of what could be done to ensure timely and successful response in the future.

STEP 7: Professional Development and Student Training

Professional development for staff is often regarded as the single most crucial (and often neglected) aspect of any wide-scale education-technology or new curriculum adoption. Professional development for teachers, principals, and support personnel should be ongoing, with assistance at every point of the pilot. Be sure to ask yourself if professional and student training resources will be available, and if so, how can you ensure that these resources will be utilized properly?

STEP 8: Community Support

In order for the POC phase to be successful, strong local support (e.g., school boards, school administrators, teachers, students, and parents) is often essential. While a challenge to quantify, support and interactions with parents and the community should be captured, measured, and considered when conducting an evaluation.

STEP 9: Gauging Success

It is vital to identify and document the program outcomes, activities, and indicators that will be evaluated from the onset. Evaluation can also be something of an evolution, so prepare for subtle "corrections" during your pilot.

These desired outcomes should be realistic as they will set the tone for all future program implementation and evaluation activities. Program evaluators should look out for unintended outcomes in addition to outcomes specified in the program's goal statement. Negative outcomes, in particular, can be immensely useful—when evaluated thoughtfully—in assuring progress toward intended outcomes. Ignoring these outcomes can prove disastrous down the line.

After data is successfully obtained, then it must be meaningfully analyzed to determine what measures must be developed in the future. Evaluators must be careful to not carelessly interpret data but have the measures in place so that it is analyzed objectively.

These evaluation measures ensure that the appropriate mechanisms and metrics are in place to evaluate, assess, and adjust the program both during the testing period and after the program is complete. Provide a detailed consensus from all consultants, advisers, personnel, teachers, teaching assistants, parents, and children, as well as any available progress data, including comparative statistics and observations. Stakeholders should be also be interviewed and asked how, specifically, the program had been successful, what challenges were encountered, what could be improved in the future, and what aspect of the pilot was most valuable.

Once the initial pilot is completed, it should demonstrate and confirm the success of the new program to pave the way for an official rollout. A POC helps prove a concept not only for IT staff, but also—perhaps most importantly—the end users: teachers and students. Through this experience, you can learn about your options, test products, try better instructional technologies, and save your district money. As the visionaries behind an innovative pilot, you have a vested interest in its success and overall impact on your school's students, helping them to realize their infinite potential. If your team can thoughtfully and comprehensively define your program's goals and have the measures in place to assess the quantity and quality of the program's results, you will be adequately prepared for a successful implementation.