the LEARNING COUNSEL

Research & Context on the Shift to Digital Curriculum

2013-2014 Digital Curriculum Strategy for K12 Schools

What is a Digital Curriculum Strategy?

Many schools have a technology plan. It was extremely popular to have lengthy and involved plans written and rendered into elaborately formatted documents about five years ago. It seems like shortly thereafter the speed of change picked up to such a degree that it is difficult to find a current, useful plan.

For purposes of this brief, we will address digital curriculum strategy from the viewpoint of innovation in K12 districts.

With the advent of so many 1:1 or BYOD tablets and laptops, school IT and curriculum staff in K12 have been overwhelmed with roll-outs. The transition to teaching with technology is well under way. Even so, most schools are operating with a loose tech plan that is constantly changing and no real digital content and curriculum plan.

The two types of plans are not mutually exclusive. Yet without a complete content and curriculum plan, many of the tech plans are falling on their heads.

It's important to briefly describe what a Digital Curriculum Strategy would look like, and start with what it is not.

1. It's not a device roll-out plan.
2. It's not a network upgrade plan.
3. It's not a content management system.
4. It's not a limited set of apps or subscriptions, which would be mere tactics.
5. It's not a Standards Compliance Curriculum Mapping.

A Digital Curriculum Strategy is:

The development and arrangement of curriculum tactics to provide for conditions of digital device integration in teaching and learning.

STRATEGY BRIEF

AUTHORS

DAVID KAFITZ, JR., Ed.D.

Expert and charismatic change-agent helping schools move forward with a well-reasoned strategy for digital content and curriculum with complementary personnel and IT strategy.

- Former Superintendent, Watauga County Schools, Boone, NC
- Former Principal, East Elementary School, & New Town Elementary, Union County Public Schools
- Former Director Technology Services, Union County Public Schools
- Consultant on IT and Education with a track record of real-life implementations.

LEILANI CAUTHEN

Well versed in digital content and curriculum change, the adoption process, successful strategies, and helping schools understand what's available and what will work.

Leilani is a consulting, media, research, marketing and sales professional with 26 years of experience in the high tech, government and education sectors.

Why do we need a strategy for digital curriculum? First, let's look at where we've been on the subject of curriculum and then where we're headed. For perhaps 80 years schools have relied on textbooks and libraries as the foundation of content for lesson plans. Workbooks complimented textbooks and provided a streamlined set of tactics by subject. Video and streaming TV augmented these. Later subscription services for libraries of lesson plans and other content came into play.

The history of instructional design theory has also evolved and is now finding itself inextricably entwined with the new forms of delivery inherent in the new technologies. Fascinating discussions concerning how the delivery model via tech is changing the student/teacher relationship and instructional design are popping up on the internet.

To complicate the entire matter, new Standards have come onto the scene just as curriculum directors and teachers have become more used to technology integration in their old lesson plans. Now a whole lot of revisiting what's being taught and how has to be done. Many schools have been scrambling to both innovate with technology and execute compliance with new standards all at the same time.

For the past decades, most schools relied on a handful of publishers for source materials to use in instruction. School Boards had as a main duty the vetting of textbooks. They and the Superintendent and immediate staff would do large deals to buy large quantities of things from a few publishers. Then came the digital age and almost before we knew it, there were far too many things and companies to vet. The "system" of selection and vetting in large part has devolved to the individual teacher with some remnants of overlay still in place for materials being driven from management down to the troops, the teachers. This took what was a fairly clear and clean strategy to a non-strategy in most places. This non-strategy is enormously expensive to the system, though largely unseen in the excitement to go digital.

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To put this more plainly, the continuity of instructional operations has been disrupted. First by technology, then by Standards. That disruption has not stopped, and is continuing to evolve with testing and ever-new technology, bringing with it system-wide administrative burdens that are rarely estimated for the dramatic loss of efficiency.

While hard to measure, the confusion relating to an annual set of morphing instructional goals and a daily routine set on fire with new devices everywhere, has not only a personal cost in stress for the individuals involved, but a cumulative national stress. The health of the system demands steps to bring order – a booster-shot of leadership with strategy and policy.

In practice, most schools start with their State's requirements and standards for curriculum mapping. Districts download the State level frameworks and then have typically worked with various publishers to get the majority of those frameworks covered. Teachers get guidance from the Superintendent, Chief Academic Officer or Curriculum Directors for what they needed to teach. Nationally, there is a wide variance for how sophisticated the curriculum maps and master plans have looked for teachers and districts. In many cases, there simply are no master written curriculum plans by grade, subject, and topic set against a learning calendar. States typically also offer some sort of pre-vetted curriculum materials and sometimes State-created materials to help with the mapping. Most districts have some sort of selection policy, and all are governed under their States' procurement policies. Some districts create some of their own materials to meet some requirements and own them in perpetuity. Other's allow the intellectual property to go to teachers, who can create great lesson plans and offer them for sale online.

The Learning Counsel has developed a starting point for the creation of a Digital Curriculum Strategy with the following grid of goal development to final strategy document. With this Brief, we are not including all aspects of academic planning that go into the creation

of a true Digital Curriculum Strategy, just a starting point.

District strategies would now look like this (Figure 1), where the curriculum mapping that is done on a district and school level is followed by a digital curriculum strategy. This new strategy document ties in with the typical tech strategy, both of which dovetail into individual teacher lesson planning for total school innovation.

In Figure 2, the process developed by the Learning Counsel for the creation of a Digital Curriculum Strategy starts with goal setting, creation of purpose based on the district or school's aims that year, analyzing and possibly reseting policy, and then goes into planning and the individual programs that will need to be completed to arrive at a final strategy.

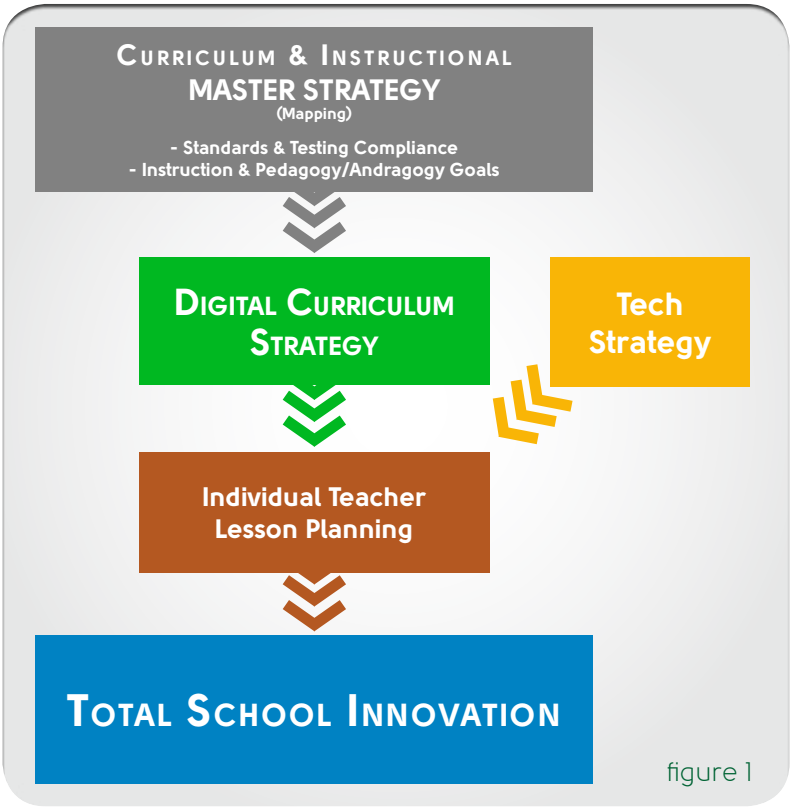

figure 1

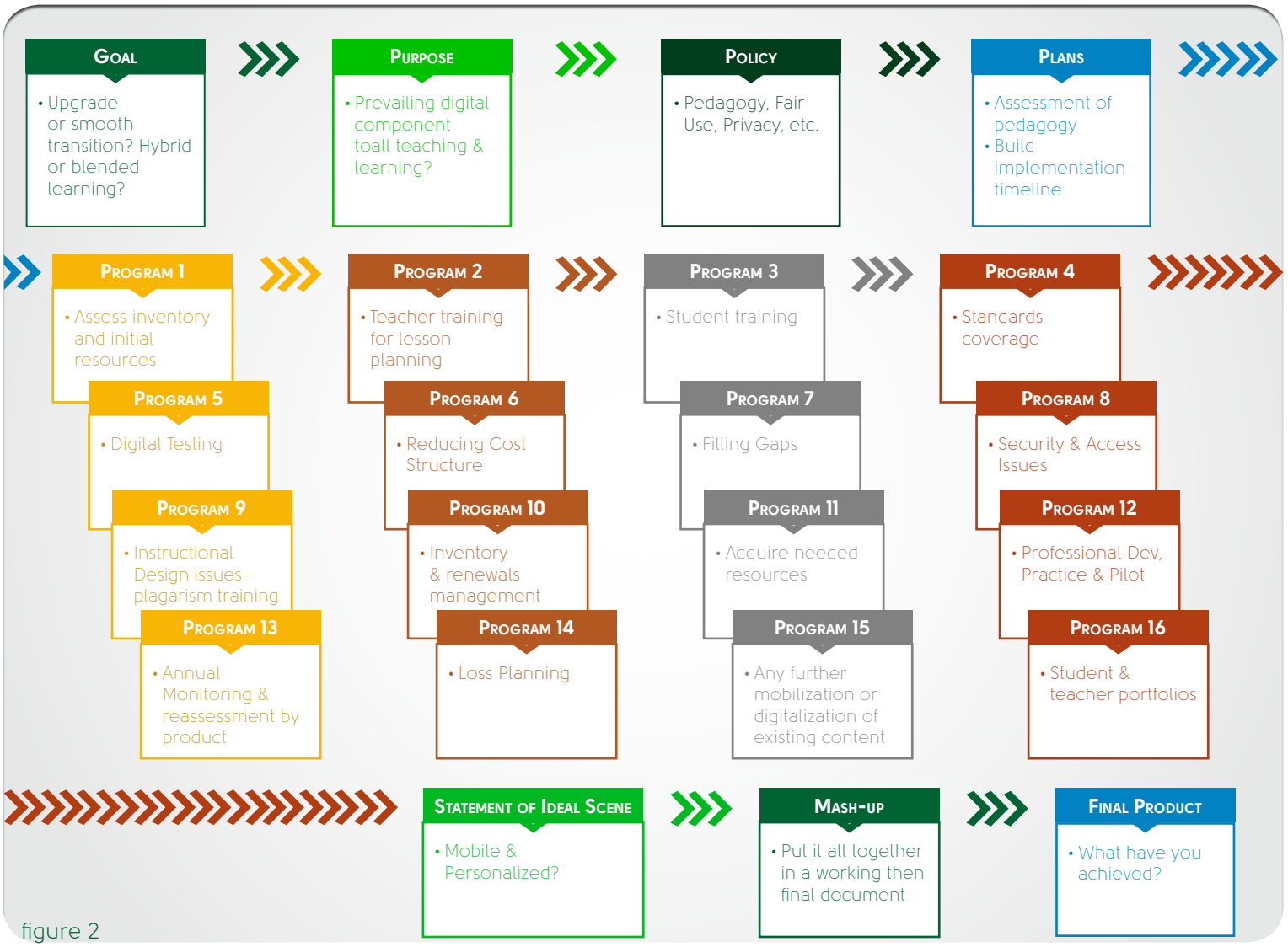

figure 2

NOTES ON THE PROCESS

To go with the above grid, in this brief we are including a few notes on some of the types of things you can use this particular strategy framework to accomplish. Again, this is not a complete strategy with all individual tactics as this is a brief introduction. The Learning Counsel has developed a separate Digital Curriculum Strategy Guidance document that is used during our Discussion live events and that forms the foundation for our help consulting to districts directly.

In the Learning Counsel process, we assess schools for their Strategies based on whether they are proficient in their completed strategy setting, developing, or emerging. Those three stages are how to typify a district or school with regards to strategy.

1. Create a Goal

This is from the viewpoint of digital curriculum, both as a known objective and as something towards which actions are directed with the purpose of achieving some end. For most schools this will be a smooth transition or upgrade. It might be that you need to determine pedagogy versus andragogy, particularly as you consider some of the new thinking around technology in education. For example, Rod Sims of Capella University in his paper "Beyond Instructional Design: Making Learning Design a Reality" in the Journal of Learning Design, makes this observation:

"If instruction represents a form of delivery, and if we are beyond delivery, then we have reached a stage where we are beyond instruction."

His point, reinterpreted for this Brief, is essentially that fully online education, the "fully loaded" digital curriculum that logs in a student and takes them through content and does assessments inclusively in the design, is delivering the instruction. This can be argued to create a functional difference in teaching, and provide ancillary benefits such as personalization, individualization against study time so that faster students are able to master "grades" earlier, significant cost savings, and more. It may or may not be your district's goal, particularly for the K-6 crowd.

That type of aggressive goal could, however, be stated to be "hybrid instruction and reduced cost structure to teaching and learning through technology." Cost of materials and teacher lesson planning time could go down. There are plenty of other ways to state goals, and in our expanded Special Report in 2014 on this topic we will be citing what some of the more advanced Districts are doing.

The Goal of a digital curriculum strategy should not, in its thinking, be divorced from the platform or the mix of access whether that is 1-1 or labs or carts or BYOD. This is where the cross with the tech strategy is important to consider for the curriculum strategy. The choice of platform should be dependent on the curriculum, not the reverse (i.e. the hardware should not drive the curriculum selection). If you go the reverse route you may end up with the more expensive route on curriculum – wait for it to be built, build it yourself, or scramble around to knit a decent portfolio together. The mix of access could determine a great deal of the structure you'll need in curriculum. For purposes of communicating to management and staff, the statement of the Goal could be fairly long and short statements of the Plans, Programs and Projects that branch off of it.

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2. Establish Purposes

This is a lesser goal expressing future intentions. It's important to write it down and get it agreed upon. A purpose may aim at determining what learning theory will the district lean on for what grades, and what subjects. It may answer if that theory will be a universal for the institution or more as-appropriate. As a purpose it may seek to create some continuity across a district for the sake of cost savings as an intention.

An example of a Purpose might be: "The (Name your District) will adopt digital curriculum to ensure a prevailing digital component to every important aspect of teaching and learning in every subject at every grade." The operative word here would be prevailing. Or it may be a purpose organized around objectives, then subject matter, and finally the learning experience intended. You may have to have different Purposes for primary, middle and high school since teaching and learning is so different by age groups.

3. Set policy

This may start with a survey of any existing school or district instructional and curriculum policies. These may include the instructional theories in use and any shift in intention, institution and staff policies. It's important to do this because some of the pedagogy is going to shift and you'll be able to know who is used to doing what.

4. Make a Plan

A plan is really a short-range broad intention for handling a broad area and will have broad steps. To have a good plan, it's best to start with these two steps (a & b), and then write up the plan, which will have programs and projects.

a. Assess the System of Instruction

How and what are teachers teaching with now. Are they using the thousands of whiteboards invested in already? If so, this may dictate certain types of curriculum and interaction with tablets that will set up lesson plans.

Do they run a lot of projects that will require collaboration tools?

Are they primarily lecturing so lecture capture could be useful to go to a flipped-classroom model?

There's a lot of other questions to ask here that will formulate a curriculum strategy, not the least of which is to ask the teacher directly:

Have they already found some digital curriculum that will fit their subject? Assessed the lesson-time used? Is it core or supplemental only? What about special needs? What if they have to teach dually – part on tablets and part on paper because some parents won't allow kids to have a tablet?

Do they have questions and input?

b. Build an Implementation timeline

This is not going to be as quick as everyone would like, but you can set up a strategy with sub-tactics and distribute them out to groups. Some sub-tactics such as a consultant to flank the work of all groups to consider special needs, testing requirements, remote access, teacher training, parental involvement, student training, and more can be set up if you don't have some of those expertise in-house.

Under the Plan – Write the Programs

Underneath the plan will branch off individual Programs, which can be distributed out to others or small groups. Each program comes together at the end to form the written strategy.

A Program is a series of steps in sequence to carry out the bigger overall plan. Here is a short list of potential programs, which are not necessarily in an order as most schools would run a good portion of them concurrently. Some have further notes for purposes of this brief, and there are other programs that may be needed for any one particular district or school.

Possible Programs

A. Assess Initial Resources.

First take inventory of everything you own. You probably won't be able to figure out whether very much of it meets Standards on your own, but some of it might. This is a lengthy process.

When taking inventory, give a briefing as to what all you are looking for including lesson plans, apps, subscriptions, video, lists some teacher made of cool sites to visit for a subject, everything.

A Program is a series of steps in sequence to carry out the bigger overall plan.

Ask around as to who in your district or school has any instructional design background. This can be useful for making up digital curriculum either on your own or using a service.

Next you need to assess without bias what's in the market for purchase or free. An obvious point is also to assess whether free is actually free or will run into issues such as out-of-date, must be maintained, will cost to build mobility into, etc. Consultants like The Learning Counsel can advise on all the sources including the nationally known big publishers, the new "born-digital" publishers, app developers, commercial app sources, online content libraries, government curriculum sites, professional development digital curriculum, build-your-own tools, productivity and creativity tools, and more.

Next you need to tag back to what sort of storage and management the district or school has in the way of Learning Management Systems and Student Information Systems. It may be that what you already own doesn't provide the APIs (application interfaces) that will allow you to port in something else you really

want to use, which will make it all messy to access that particular digital curriculum. Or you have decided on a lot of subscription services that are not going to require teachers to remember 25 or more different passwords.

B. Teacher training for lesson planning.

It's not enough that teachers know how to use devices. They have to know how to lesson plan around them and how students will participate with them in whatever model of teaching and learning you will be using. If its personalized learning, how much lesson time is taken up per what module? What will the teachers do with the students who make it through faster? Lesson planning is also a ripe area for policy problems, where teachers can download or use something that is against policy or puts the school at some sort of technical risk.

In addition, it's not enough to plan a few lessons that will incorporate student device use, part of strategy should be to set some goal for number of lessons that are primarily using devices in the first year, the second year, etc. Planning for the remainder of how the rest of the time will be used needs to be considered. In addition, how the lesson's demand homework assignments and how those will be gathered needs to be part of lesson planning as well as the technology.

Communications between students and teachers should also be considered, along with student and teacher storage of essays, videos, presentations and more.

C. Student Training.

Device and responsibility training are important. A lot of adults think that kids born in the digital age "just know" how to use the devices, but this is not true in all cases and keeping passwords and personal security are aspects that need training. Planning for an annual "refresh" should be part of this, since new tools and new students will be part of the mix. Including parents in this process is desirable.

D. Getting Coverage for Every Standard.

Most schools will have to start with a model that uses existing textbooks and some digital materials because the cost to go completely digital while buying all the devices needed at the same time could be prohibitive. Such schools will be "emerging" in terms of strategy. They may have only a small handful of digital curriculum pieces per grade or start with general apps that everyone can use.

E. All Digital Testing.

Many schools do not have enough devices to administer testing, or have some other inhibitors. The tactic for testing may be rotating exams through testing labs, with a lot of planning going into timing so that all kids in a grade-level are tested within a time limit set by the State or Federal standards. There are plenty of considerations to plan through with taking testing digital.

F. Reducing Cost Structure.

The cost of digital materials may seem prohibitive if the school is also still buying paper textbooks. Many schools have bought the digital rights to textbooks and ceased purchasing all paper while they move into an emerging or developing posture with digital curriculum strategy.

G. Filling Gaps.

You could run or distribute several Projects under this program. A project is a sequence of steps to complete one part of a program. One project might be getting a firm understanding of lesson-time used in known digital curriculum already in existence, and the overall need for any one subject. This would be an extension of inventory taking and shows up gaps. Another project might be to custom build a piece of digital curriculum and build a lesson plan around it. A project like this could involve hiring instructional designers and having to know what to ask them about their capabilities.

H. Security and Access Issues.

Student security has to be considered at all times, and vetting digital curriculum is a fairly new undertaking for many schools. This is one area that the choice of digital curriculum pieces needs to be considered against tech strategies. Access issues are also important to consider, especially when content can be mobile and therefore be shared and possibly introduce instructional design flaws. For example, tests shared with other students.

I. Instructional Design and Plagiarism Issues.

There may be flaws in some content that can be purchased such that the content includes no assessment or review, or can be altered by a student to the detriment of other learners. Where a school engages in teachers building their own curriculum elements digitally, there may need to be a refresh on plagiarism issues that could be a liability to the school.

J. Inventory and Renewals Management.

Many schools have already found that they have very long lists of digital curriculum, digital subscriptions and apps at all levels, including teachers who have downloaded potential security-risk content. Managing and knowing what all of these things do is part of inventory work that would necessarily include keeping up the renewals and making what is owned searchable and tagged appropriately for the entire enterprise to use.

K. Acquire Initial Resources.

A good idea would be to take a look at what other schools are doing with their bids. There are more than 700 companies to assess and literally thousands of resource sites with open source or paid content.

L. Professional Development, Practice & Pilot.

The PD that goes with various types of content can be extensive. It is best to run a program that groups content types for how they are accessed first, then lists them by grade, by subject and lesson-time used. Allowing teachers to practice accessing, and know rules of student access and distribution, is all part of piloting for a full digital curriculum strategy.

M. Annual monitoring and reassessment.

Some publishers will sell or bundle content that may not be being used by teachers. Instead of just renewing a massive license annually, school leaders should check with teachers on what is being used and what isn't to set up better negotiations in later years.

N. Loss planning.

Digital content that is downloaded may have to be paid for again if it has to be downloaded again. If a student, teacher or school loses the original, there needs to be a loss plan in place.

Storage strategies in non-technical language for digital curriculum directors need to be known and understood so that the curriculum and tech teams can work smoothly together.

O. Any further content transition such as making the content mobile or digitizing it.

In some instances, existing content needs to be made mobile so that it works on the devices the school is issuing. There may need to be a program to translate this content via programming or outside vendor to make this happen. This program would work out what content and prioritize it for getting that done. Other content may still be paper-based and need digitizing. In this case a program might need to be run to ensure no copyright laws are being abused in the process of digitizing this content and distributing it to teachers and students.

P. Student and Teacher portfolios.

The issues in storage and access may have been partially addressed with discussions and implementations around security. Possibly there are some more issues to address such as portfolios. For example, if they are in the school system, how does the student access them as permanent records? Can they continue storage indefinitely? What's included in a portfolio? What other records need to be stored for individuals?

State the Ideal Scene

Next, a good Strategy for Digital Curriculum would state its ideal scene. An ideal scene might be something like "Every student grades 9-12 has a completely mobile and personalized curriculum." Or it may be "Every grade has a set of Apps to use for digital interaction," for a school targeting just an emerging level digital curriculum strategy. A developing strategy might have an ideal scene that states that "50% of all curriculum in all grades has a digital component and uses collaborative tools for interaction, homework and class projects." A proficient-level ideal scene might be something like "100% of all Standards have a digital curriculum component and all grades use collaborative tools for interaction, homework and class projects that are viewable by administration dashboards."

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Mash-Up

Once the above steps are all done, the team that's been assembled can put all their lists and statements together into one document.

Initially, this document is a working document that is shared and reviewed by the rest of the administration and mashed-up with the main curriculum strategy and the tech strategy.

The final "Digital Curriculum Strategy" document is a final edited version citing the final Goal, Purpose Policies, results and statements of all Plans, Programs and Projects, and then the Ideal Scene. In the following year it should also have stated the "Final Product" described below.

As part of running the programs, be sure to have taken some candid photos of meeting, trainings and the hard work of making lists and spreadsheets of things! Those can go into the final document as part of the illustrations of accomplishing a full Strategy.

Identify the Final Product

Finally, what is the final product or outcome of your strategy after-the-fact of implementation? Has it created something tangible and great for the students and teachers? Are test scores increased?

Once you work out a real strategy, you can expect minimal updates and some repeat projects every year.

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The Learning Counsel helps education professionals in the K12 and Higher Ed sectors gain context on the shift to digital curriculum. The more than $23.3 Billion curriculum industry across K12 and Higher Ed is in transition, maneuvering through the intersection of policy, technology leadership, old habits and new enthusiasms. The Learning Counsel seeks to bring consulting and online resources for everyone in the fray, from school seekers-of-resources to industry partners in need of services. We are building an agnostic sharing and recommendations platform to advise schools on all things related to digital content and curriculum. Based in Sacramento, California, The Learning Counsel has staff and an extended family of contributors across the U.S. and in the Ukraine.

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