

THE LEARNING QUEST

A Tool for Design Planning and/or Research

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The most critical literacy needed in today's world is information literacy. In a world of "fake news", design economies, and instantaneous access to information, our students (and teachers!) must be able to access information, evaluate information, share information, and use design thinking to promote new ideas. They must be able to do this efficiently, strategically, and most importantly ethically in various settings and media. This new method of learning requires new ways of learning and teaching. New skills and knowledge must also be acquired. New pedagogies must be incorporated to teach in this new world.

Fortunately, this work is being done in many ways and many places. The Model School Library Standards from the California Department of Education has done an excellent job of identifying the various information literacy skills needed. Their work also provides a framework to help teach these skills. Similar work is being done in other school systems around the world. Design thinking models are also plentiful. The Design School at Stanford University has a model that has been replicated in business and education. Many other models also exist to help define the steps and desired outcomes of design thinking.

So, if we already have existing standards and models, then why does it seem that these practices are so seldom seen in our schools? More importantly, how do we integrate these new literacies with the existing literacies that still must be learned?

That are many existing roadblocks to this type of learning and teaching. The first is that it runs counter to most of our existing pedagogies. Most currently used pedagogies (this list hasn't really changed much over time) are teacher centric. They rely on the teacher determining all aspects of learning. Every step is clearly laid out. The teacher introduces the material to be learned. The teacher asks all the questions, reviews each student's progress, and is the key component in all learning that takes place. This is a bit of an overstatement but not by much. This is not meant to be critical of teachers either. This is not just how we have trained teachers but it is also how we hold them accountable. Unfortunately, while this instructional methodology works in some cases, it is not ideally suited for design thinking or personally driven research.

How then, do we shift pedagogy to support this new learner center focus? Starting with new information literacy standards and design thinking models is a beginning but it is not enough. These tools are helpful (and should be taught) but they do not create an easy template for instructional use.

That is why the Learning Quest Design/Research Tool was created. This tool uses the framework of an instructional unit plan. Teachers are able to use the tool and follow the learning steps in as much detail as they require. The tool allows for teachers to have more or less input (depending upon their own comfort level around all critical instructional issues. They can determine the issues to be studied, the learning activities to be used, and the assessments to measure progress if they wish. They can also let the lesson develop organically from a single leading question and adjust and support as learning occurs. This model is built around the central foundation of asking good questions and then using those questions to guide research and design.

Learning Quest as a Research and/or Design Tool

The Learning Quest is an adaptable tool that can serve a number of functions. Sometimes, a learner is just attempting to learn about a subject of interest. The full eclipse that many students observed in 2017 is a great example of this. Students were intrigued about the eclipse and wanted to know what was happening. The Learning Quest model was a great tool to lead the learner from a driving question about the phenomena to answers explaining what was happening.

The tool is also able to allow the learner to move beyond research and apply this new learning to design. Learners using the tool to support the design process still begin with questions and research. In this version of the model, the learner will then take this new learning and use it to solve a problem. This can result in a new tool, a plan, or a new approach. This process was demonstrated when students were challenged with a leading question related to moving and filtering water in a farm setting. Students needed to learn about the various ways that water can be moved from one point to another and also different types of ways that water is filtered. Natural water movement and filtering was examined as well as manmade designs for these processes. Ultimately, this learning led to student created pump/filters that were designed and tested.

Using the Learning Quest Model for Organizational Change and Planning

Although the Learning Quest Model was designed as a learning and teaching tool, it also serves well as a guiding tool for organizational change efforts. At its core, most organizational change work is based upon design thinking. This work then leads to a change plan that helps the organization implement a set of action steps created to drive new innovation or continue the work of existing efforts.

The model does not really need to be adjusted much for this use. The assumptions would be that the organization (or more accurately, the stakeholders in the organization) are the learners. The goal of the process is designing new practices, processes, or ideas to drive the organization forward. The design work will probably entail some level of research and the process starts with questions.

The Encinitas Union School District has used this tool to assist with organizational planning in a number of ways. Most recently, the District used The Learning Quest Model to develop an Environmental Sustainability Plan that resulted in detailed actions that supported short-term actions, long-term actions, and areas for further research and study.

THE LEARNING QUEST MODEL

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Question(s)

- Formulate the Leading Question: What is the Leading Question to be answered? The Leading Question is best if it is a real-world problem that you are trying to address. Test- Anything that can be answered with a Google search or it is something that the teacher already knows the answer, then it is probably not the best Leading Question. Leading Questions start the process and focus the follow-up questions, designs, and research on this big picture issue. Leading Questions should be focused enough that they can be answered but broad enough that they can be approached from many different perspectives.

(Initially this is probably a learning facilitator task. However, as the learners get more skillful at Learning Quests, learners can eventually create their own Leading Questions.)

- Follow Up Questions: These questions help the learner answer the leading question:

Defining Questions – These are questions that help clarify the leading question and define what exactly you will be learning and doing. Start with making the leading question itself clearer if possible. Then define terms or concepts within the leading question.

- **Research Questions** – This set of questions will help you gather information to answer the defined leading question.
- **Other Questions** – Often the Learning Quest will lead the learner to think about other ideas or concepts. These questions are wide open and extend the learning for individual learners. New questions can be added at any phase in the Quest.

(Learning facilitators again can be in control of this activity but the learners need to be the ones asking the questions. The learning facilitator can eventually release control of grouping by common factors or themes as the learners become more skillful at the process.)

Understand

- Task Understandings: What parameters do we want to put on this unit?
 1. Time - What is our timeline for this Quest?
 2. Team - Who will I work with on this Quest?
 3. Task - What format will our answer take?
 4. Technique - If known, how will we try to solve the Quest?
 5. How will we share our work?

- Understanding Perspectives:
 1. What existing perspective, knowledge, beliefs, or bias do I start with about this issue? What impact does that have on my work?
 2. What do I need to understand or know about the impacted audience that this QUEST is focused on that will help me do this work more effectively?
 3. Is there anything that I can learn from nature or natural solutions that would help inform my work on this task?

- Question Topics: What big ideas or concepts do I need to learn, know, or experience to answer the questions that have been raised? Which ones will I focus on in this unit?

(Learning facilitators will probably establish the task understandings. The learners and learning facilitators will probably work together on the remainder of this part of the Learning Quest.)

Experiment
Experience/Explore

- Starting the Work to answer our questions:
 - What experiments should I conduct to solve the Quest?
 - What learning experiences should occur to help me solve the Quest?
 - How can we explore these ideas deeper?
 - What data will help guide our work?

(Learning facilitators can have as much or as little control around this work as they desire. Some experiences and experiments may require preparation time before the Learning Quest begins, so the learning facilitator may need to organize these.)

Solve

- Create solutions to the Quest:
 - Create models and prototypes if solving a design challenge.
 - Answer specific questions that help us understand driving questions.
 - Design multiple iterations of solutions.
 - Use critical feedback and reflection to improve design or refine research.
 - Analyze various solutions that address understandings and answer leading question.
 - Evaluate and concisely determine best answer(s) to leading question.

(This is a learner task.)

Tell

- Tell your story
 - Who is the audience? Why do they care about this?
 - What format / media do you use to tell the story?
 - Answer the leading question.

(This is a learner task but must follow the task understandings section.)

THE LEARNING QUEST TOOL KIT

DESIGN QUEST

Purpose: The Design Quest is a tool that helps the learner create something new such as a tool or plan. It is usually used to address an identified problem and it should lead to something being created such as a new tool or a new plan.

Problem You Are Trying to Address Through New Design:

QUESTION(S):

Leading Question -

Follow-up Questions -

Defining Questions - Clarify the leading question by asking focused questions. Then determine what questions need to be answered to help define concepts or terms related to the Learning Quest?

(Example - What does "Efficient" mean if we are designing an energy efficient house?)

Research Questions - What information do you need to gather to help answer the leading question?

Other Questions -

Key Themes to Explore -

UNDERSTAND:

Task Understandings -

- Time Frame -
- Team(s) -
- Task -
- Technique -

Perspective Understandings -

- Pre-existing Perspectives or Bias
- Audience / User Perspectives
- Nature Perspectives

Big Ideas / Themes / Areas of Inquiry / Focus Areas -

EXPERIMENT / EXPERIENCE / EXPLORE:

Preplanned Activities -

Are there any predetermined experiments/experiences/explorations that need to be planned or prepared in advance?

Ideation - Generate potential solutions to the problem.

Research - Is there research that still needs to be conducted to help you test your ideas?

SOLVE:

Analysis and Evaluation of Solutions -

- 1. Addresses Understandings**
- 2. Answers Leading Question**

Review results of experiments, experiences, and explorations. Which solutions best address understandings and answer the leading question?

Models / Prototypes -

Create models/prototypes that demonstrate solution (if appropriate).

TELL:

Audience? -

Format of Presentation? -

Show Design Prototype / Model / Plan -

THE LEARNING QUEST TOOL KIT

RESEARCH QUEST

Purpose: The Research Quest is used when a learner wants to learn more about something. It can lead to further learning or some form of action, such as a design project but that is not the goal initially. In this form of Learning Quest, the goal is to acquire new learning.

Focus of Research:

QUESTION(S):

Leading Question -

Follow Up Questions -

Defining Questions - Clarify the leading question by asking focused questions. Then determine what questions need to be answered to help define concepts or terms related to the Learning Quest?

(Example - What does "Healthy" mean if we are researching what is the healthiest community in San Diego County?)

Research Questions - What information do you need to gather to help answer the leading question?

Key Themes to Explore -

UNDERSTAND:

Task Understandings -

- **Time Frame -**
- **Team(s) -**
- **Task -**
- **Technique -**

Perspective Understandings -

- **Pre-existing Perspectives**
- **Audience Perspectives**
- **Nature Perspectives**

Big Ideas / Themes / Areas of Inquiry / Focus Areas -

EXPERIMENT / EXPERIENCE / EXPLORE -

Preplanned Activities -

Are there any predetermined experiments/experiences/explorations that need to be planned or prepared in advance?

Research Work:

Data Gathering -

Scientific Experimentation

Digital / Print Information Gathering

Expert Interviews

Data Analysis -

SOLVE -

Potential Solutions -

Assist learners with critical feedback on potential solutions to leading question. Help learners stay within guidelines of task understandings.

Analysis and Evaluation of Solutions -

3. Addresses Understandings

4. Answers Leading Question

Next Steps Based Upon Research Findings -

TELL -

Audience? -

Format of Presentation? -

Research Findings -

Planned Actions / Next Steps Based Upon Findings -