Research Questions Guiding Use of Digital Curriculum Platforms in Data-Driven Practice

Presented by

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Stakeholder Goals for a Digital Curriculum Platform

- **Curriculum developers** desire robust technology and quality digital content to build standards-aligned units and conduct research to support data-driven practice.

- **Educators** desire a digital hub to collaborate, plan, access, and evaluate the effectiveness of standards-based curriculum, instructional, and assessment content.

- **Students** desire online instructional materials and information about their progress to help them learn.

- **Parents** desire easy digital access to curriculum, resources, and information about student progress to help support student learning at home.

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Using a Platform to Support Data-Driven Practice

1. Identify research questions based on stakeholder goals
2. Select metrics that take advantage of platform capabilities
3. Use platform to continuously collect data and track metrics over time
4. Evaluate data to drive practice and optimize implementation

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Platform Implementation Cycle

**PLAN**
Identify/ develop curriculums and aligned instructional materials/ assessments

**EVALUATE**
Measure curriculum impact on student learning and teacher efficacy

**IMPLEMENT**
Engage in an ongoing cycle of curriculum-aligned instruction and assessment
## Identifying Research Questions

**Sample Questions**

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the curriculum comprehensively cover the standards?</td>
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<tr>
<td>Are instructional materials aligned to standards and the curriculum?</td>
</tr>
<tr>
<td>Are assessments aligned to standards and the curriculum?</td>
</tr>
</tbody>
</table>

**PLAN**

Identify/develop curriculums and aligned instructional materials/assessments
Identifying Research Questions

Sample Questions

- Is instruction delivered with fidelity to the curriculum?
- Are assessment results used to guide differentiated instruction and intervention/enrichment?

IMPLEMENT

Engage in an ongoing cycle of curriculum-aligned instruction and assessment
### Identifying Research Questions

#### Sample Questions

<table>
<thead>
<tr>
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<tr>
<td>Does the curriculum result in student mastery of standards?</td>
<td></td>
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<tr>
<td>Is the curriculum effective for students of all abilities including special populations?</td>
<td></td>
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<tr>
<td>Do teachers find the curriculum helpful for planning instruction?</td>
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</table>
Example: The Galileo Digital Curriculum Platform

- Enables rapid development and use of multimedia digital curriculums, units, lesson plans, instructional materials, and assessments.
- Supports alignment to Arizona and other state standards in all grades and content areas.
- Fully integrated with broader Galileo K-12 Online assessment and reporting system.
- Built on the foundation of the ATI research and development program.
- Developed in collaboration with educators across Arizona.

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Innovative Builder Tools for the Digital Age

**Digital Curriculum Builder**
Create a series of online units representing a course or pacing guide and including vetted digital instruction and assessment resources.

**Lesson Plan Builder**
Organize digital content to plan instruction and assessment for a topic.

**Dialog Builder**
Create online interactive multi-media lessons and assignments integrating instruction, assessment, and teacher-student communication.

**Builders Support Integration Of:**
- Slides organizing content (text, images, videos)
- Standards
- Instructional materials
- Assessment content

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Real-Time Access to Valuable Digital Content

A continually growing searchable bank of vetted Arizona standards-aligned instruction and assessment materials

Dialogs and Formative Assessments

Dialogs, Videos, and Activities

Lesson Plans and Curriculum Resources

Dialogs, Videos, and Activities (Dec 2016)

Resource Builder supports integration and sharing of weblink or file resources purchased, identified, or created by the District

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### Selecting Metrics Based on Platform Capabilities

<table>
<thead>
<tr>
<th>Sample Questions</th>
<th>Sample Galileo Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the curriculum comprehensively cover the standards?</td>
<td>• Percent of standards covered</td>
</tr>
<tr>
<td></td>
<td>• Number of times each standard is covered</td>
</tr>
<tr>
<td>Are instructional resources aligned to standards and the curriculum?</td>
<td>• Number of resources aligned to each standard</td>
</tr>
<tr>
<td></td>
<td>• Number of resources aligned to each unit</td>
</tr>
<tr>
<td>Are assessments aligned to standards and the curriculum?</td>
<td>• Percent of standards assessed</td>
</tr>
<tr>
<td></td>
<td>• Number of times each standard is assessed</td>
</tr>
</tbody>
</table>

**PLAN**

Identify/develop curriculums and aligned instructional materials/assessments
## Selecting Metrics Based on Platform Capabilities

### IMPLEMENT

Deliver curriculum-aligned instruction to students

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<thead>
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<th>Sample Galileo Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is instruction delivered with fidelity to the curriculum?</td>
<td>• Number of lesson plans delivered&lt;br&gt;• Number of standards covered&lt;br&gt;• Observational ratings of classroom instruction</td>
</tr>
<tr>
<td>Are assessment results used to guide differentiated instruction and intervention/enrichment?</td>
<td>• Number of formative assessments administered&lt;br&gt;• Number of intervention groups created</td>
</tr>
</tbody>
</table>
## Selecting Metrics Based on Platform Capabilities

**Sample Questions** | **Sample Galileo Metrics**
---|---
Does the curriculum result in student mastery of standards? | • Percent of students forecasted to show standards mastery  
• Percent of students mastering each standard
Is the curriculum effective for students of all abilities including special populations? | • Percent of students in targeted subgroups forecasted to show standards mastery  
• Percent of students in targeted subgroups mastering each standard
Do teachers find the curriculum helpful for planning instruction? | • Percent of lesson plans with linked unit  
• Teacher survey ratings

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**EVALUATE**

Measure curriculum impact on student learning and teacher efficacy
Collecting and Evaluating Data to Guide Practice

- **Curriculum Developers** can make periodic updates to curriculum, instructional resources, and assessments based on evaluation of content effectiveness and availability of new content.

- **Educators** can differentiate instruction, plan intervention/enrichment activities, and adapt assessment in real-time based on student mastery.

- **Students** can track their own progress and immediately see the impact of their efforts.

- **Parents** can evaluate student progress and focus additional support where it is most needed.
A Key Role for Digital Curriculum Platforms

- Digital curriculum platforms can be designed to meet the goals of all stakeholders related to curriculum, instruction, assessment, and evaluation.

- A cyclical approach to platform implementation can support ongoing research to guide data-driven practice.

- Platform capabilities should be considered in selecting metrics for data collection and tracking.

- Platforms providing tools that support ongoing evaluation and improvement by all stakeholders will have the greatest impact on practice.
Thank you for your attention!

I look forward to the opportunity to discuss these topics further.