Reflections on Tools and Strategies Used in the Hawai`i Progress Maps Project: Lessons Learned from Learning Progressions

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Introduction

> ***"A learning progression can visually and verbally articulate the hypothesis about how learning will typically move toward increased understanding over time."***
>
> **Karin Hess**

Little has been done by states to articulate *how* students will achieve the grade-level benchmarks in a given school year. Typically, teachers start the school year working to get all students to demonstrate learning of what is described in the end-of-year benchmarks. Determining what the learning path actually looks like within grade levels, between the grade-level benchmarks, is rarely addressed. The development and use of learning progressions (called Progress Maps) provided new insights for Hawai'i teachers to begin to see the students in their classrooms along a continuum of learning (Hess, 2008a), rather than simply seeing some students "behind" in their learning. While this work was inspired and guided by developers of similar successful models, notably Massachusetts (MADE, 2006), Hawai'i's Progress Maps were developed using a unique action research approach, with relatively fine distinctions among and between learning progressions leading to grade-level proficiency.

The goal of the Hawai`i learning progressions investigation, as defined in the Tristate Enhanced Assessment Grant/EAG proposal, was to develop high quality, validated, within grade-level performance indicators and performance tasks to measure progress and attainment of 'hard-to-assess' students. The specific objectives for the Hawai`i study focused heavily on understanding and defining the academic content targets along a cross-grade continuum. This involved creating and validating content-specific learning progressions for mathematics and reading, knowing that each content area would likely have its unique challenges. While the project's focus was not on assessment tools and procedures, both formative and summative assessments were an integral part of the data collection process to validate the draft learning progressions (Hess, 2008a). The approach, to clarify and better understand the continuum of learning as a means of assessing struggling learners, was key to this effort.

The Hawai`i research questions included:

1. How could Hawai`i improve access to the general education curriculum for ALL students, including those with disabilities?
2. How could Hawai`i improve professional development for teachers using fully inclusive, standards-based instruction and assessment models?
3. What frameworks, structures, and processes does Hawai`i need for all students and teachers to be successful?

Feedback from participants attending the 2008 CCSSO conference presentation about the Hawai'i project, "Students Who Are 'Difficult' to Assess: What Can We Do? How Will

that Help?" indicated high interest in this project. Since then, others who have heard about the Hawai`i Learning Progressions Project have expressed deep interest in learning more about the processes and tools (e.g., surveys, data collection and data analysis tools, Progress Maps templates) that Hawai`i educators developed, used, and frequently modified during an iterative process. These general processes and specific tools can assist teachers in better understanding how students K-8 learn and make progress towards proficiency in ELA and mathematics. This paper describes and provides examples of (a) how some of the tools were used, (b) what strengths and challenges field-test teachers and developers uncovered through their use, and (c) how future work in this area will be further refined as a result of the lessons learned.

Also included at the end of the paper are:

- Bibliography of Related Resources
- Appendix A: Common Data Collection Tool/Student Work Analysis (SWA)
- Appendix B: Sample Data Collection Tool (developed by teachers at one school)
- Appendix C: Teacher Survey
- Appendix D: School Leader Survey
- Appendix E: Example of "prepared" Data Analysis Tool
- Appendix F: Data Analysis Protocols for Grade-Level Teams

Development of Four Types of Tools

From the beginning of the project, the Hawai'i DOE's project leaders struggled to keep the "utilization" aspects of the learning progressions separate from the actual academic content and understanding of the progressions for the chosen ELA and mathematics strands. A variety of tools were developed throughout the project and many of them, at times, had overlapping purposes. For example, the draft learning progressions templates (later renamed "Progress Maps"/PMs) for mathematics K-8 were developed to articulate how content specialists thought students *might make progress* towards the grade-level benchmarks during the time that the content was being taught. During the Quarter 1 pilot for mathematics (fall of 2007), teachers also found it useful to use the draft PMs to write their observations right on the PM documents. Developers, consultants, and the leadership team discovered when they reviewed teacher comments at the end of the first quarter that while the comments made by teachers were useful, several things were also missing in this data-collection process:

> (a) there was no coding system to track individual students' progress from the Pre-assessment to the Mid- and then to the Post assessments in order to know which students were and which students were not making progress; and
> (b) there was little or no opportunity to make comments about student learning that was NOT articulated on the draft PMs. This was evident when students demonstrated learning that was considered "below grade level" performance or when the performance observed was not included as a descriptor of grade-level performance in the draft PMs.

These early discoveries led to some rethinking about how data would be collected by field-test teachers in the third quarter of the school year (winter-spring 2008). As a result, new and more effective tools and strategies continued to emerge.

Generally, four types of tools were created (or adapted from existing tools), and then later refined based on use and teacher feedback. Some existing data collection tools from other sources were explored during the 2007 development phase and guided how those tools or new tools could be useful in this project. Each tool that was adapted or developed for use had its strengths and sometimes its challenges when implemented in the real world of day-to-day school. Teacher time to analyze student work and record data on multiple students, and teacher expertise in developing and interpreting appropriate classroom assessments to validate the draft learning progression descriptors also compounded the challenges along the way. While these contextual factors are not the focus of this paper, they are discussed in relation to the different tools and processes used. Following the list below of the four types of tools developed is a brief summary of each of the key tools, including examples that illustrate how they were used and why they might have been refined in the process.

The tools developed for the Hawai'i Progress Maps project generally fall into these four broad categories:

I. **Draft Learning Progressions /Progress Maps** for selected Hawai'i ELA and Mathematics strands (developed, validated, and refined during the 2007-2008 school year)
II. **Data collection tools** that field-test teachers used (linked to the PM content) – these changed the most, from first quarter (fall 2007) to third quarter (winter-spring 2008) data collection periods and continue to evolve with use. Data collection tools fall into two subcategories.
    a. Common tools developed and refined for use by all field-test teachers in the project
    b. Additional teacher-developed strategies and tools that smaller groups of field-test teachers developed on their own and found useful at different times during the project
III. **Data analysis tools and data analysis protocols** used to compile individual teacher data for discussion and analysis (April 2008) and later to inform validation and revisions to the PM content documents (spring/summer of 2008)
IV. **Surveys** related to the use, effectiveness, content, and conceptual understanding of the PMs and development and implementation processes (April - June 2008)

I. Draft Learning Progressions/Progress Maps for Mathematics & ELA [Draft Hawai'i Progress Maps are available through the Hawaii Department of Education]

Hawai'i teachers and content specialists prepared detailed grade-level Progress Maps in mathematics and English language arts to guide the work of classroom field-test teachers in planning instruction and assessment for students at wide-ranging levels of achievement. The draft learning progressions were built from the Hawai`i grade-level

benchmarks for selected K-8 strands (Mathematics: Patterns, Functional Relationships, & Algebra; and ELA: Literary Response & Analysis). Developers (including former classroom teachers, and reading or math specialists) used their content knowledge, personal experience, and "best guesses" as to how a student might show learning progress from the beginning of one grade to the end of that grade level. PM templates with headings of Advanced, Proficient, and Below Proficiency (with Below Proficiency broken further into three sublevels of More Complex to Moderately Complex to Least Complex) were used to draft descriptions of progressions for each grade-level benchmark chosen. A decision was made early in the process not to "extend" the descriptors below each given grade level; that is, the least complex descriptor under Below Proficient did not describe learning at the adjacent lower grade level or lower. Two specific content strands in ELA and mathematics were chosen as the focus of the first phase of the project, in part, to make the work manageable within the given timeframe for the field-test teachers and developers involved and to establish a process and tools that would work for development of future content strands. Since the initial phase of the project, additional K-8 mathematics and ELA strands have also been developed, field tested, validated, and refined.

Strengths of the Draft Learning Progressions/Progress Maps:

When the draft learning progressions were used to plan instruction, many teachers began to rethink how they might break down the learning goals into achievable prerequisite skills for some or all of their students, based on their students' "entry levels" of conceptual understanding. Using evidence in student work to validate the draft progressions also led many teachers to rethink how they could better target their assessments to match instruction. Early in the project, some teachers started with pre-assessments that looked more like final exams, only to realize that it gave them little information at the beginning of the school year. A common statement made by field-test teachers was that they had to "toss out" their first assessments used to determine "entry levels" and better focus the assessments on the smaller, prerequisite skills described in the progressions. The focus on use of student work/assessment evidence to validate the draft progressions was the single most important factor in this project, as it lead to better small group, collaborative planning, more focused instruction, targeted formative assessment, and high quality data collection for validation.

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Challenges of Developing Learning Progressions/Progress Maps:

Using the Hawai`i grade-level benchmarks as a starting point to develop learning progressions presented some unintended challenges due to their varying grain sizes and the varying times needed to teach the concepts and skills described. Some benchmarks tended to focus on smaller discrete skills while others focused on larger concepts, taking more instructional time for students to demonstrate learning. Additionally, the initial format of describing exactly three sub-levels for "Below Proficiency" probably limited inclusion of some of the "true" stages that students might typically take to learn those skills and concepts. For example, during the data analysis process, participants found that

some of the draft descriptions were not supported by existing research of other learning continua (Biggam & Itterly, 2008; Gruenwald & Pollak, 1990; Hess, 2008b; Hill, 2001; Masters & Forster, 1996; Pinnell & Fountas, 2007; Victoria, Australia and Western Australia) and the teachers' own action research data. One example was in reading, where the Hawai'i grade-level benchmarks for grades K, 1 and 2 (and the draft learning progressions) state that students will identify the setting of a story. All of the existing research reviewed says this is a concept not typically learned or demonstrated before the end of grade 2. The field-test teachers' data confirmed this.

Lessons Learned about the Development of Learning Progressions/Progress Maps

Expanding the development of Progress Maps to include additional strands in mathematics and ELA, as well as expanding participation to more schools and teachers, and then field testing to validate new progress maps can seem daunting. There are implications for both the continued support of work already completed and new development work ahead. At the same time as planning is taking place for the development of PMs for new strands, the state is considering how to support additional teachers interested in using the strands that have already been validated. The state is considering development of a training video to show teachers how to use the Progress Maps to plan instruction and monitor student progress using evidence in student work.

One key lesson learned is that the grain size of content descriptors and the time to teach and learn are critical factors when using the Hawai'i grade-level benchmarks to build progressions.

- In many cases, benchmarks of a smaller grain size should either be combined or perhaps prioritized (based on available research) to focus on fewer and/or the most essential skills and concepts at that grade. The sheer number of benchmarks across all content strands at a single grade level could make tracking progress of students unmanageable for teachers if some critical prioritization does not occur.
- Future field testing and validation needs to take instructional time into consideration, so that teachers do not feel rushed to collect data on learning before they have fully taught the concepts. This is especially true of the ELA benchmarks that are taught over more one than quarter and tend to be of a larger grain size than the mathematics benchmarks.

Using existing available research and external content experts' input as future progressions are developed and validated will save time in development and implementation, and should minimize the need for refinement.

- Limiting progressions to exactly three sublevels probably does not reflect the real way students acquire skills and concepts; therefore more flexibility in format might be needed. Discussions about modifying the general format of the Progress Maps are beginning to take place and some small changes have already been made. For example, the headings of "Least Complex" to "More Complex" have been replaced with "Foundational" to "Approaching Proficiency" in the current progress map templates.
- While all learning progressions represent an hypothesis about how learning will typically develop, using available research to confirm and validate draft descriptors BEFORE teachers begin to design assessments and plan instruction will provide.

Greater involvement of special education teachers is needed for future Progress Map development.

- Currently, the state sees a need to consider "expanding progressions downward" to reflect students not yet working at grade level, including students with disabilities who would qualify for an alternate assessment based on modified achievement standards (AA-MAS) and students taking the alternate assessment based on alternate achievement standards (AA-AAS). Input from special education experts and more involvement of special education teachers during the development and field testing/validation processes is warranted to better document learning pathways for these student populations.

II. Common Data Collection Tools (See Appendix A)

At the start of the project, first quarter data were collected using the actual draft Progress Maps. Teachers made notes directly on the maps to indicate the number of students who demonstrated each of the descriptors. Figure 1 (below) shows an excerpt from a grade 8 mathematics progress map with notes about the first/pre-assessment given. Based on the teacher's notes, there were 20 students in the class. Seventeen of the 20 students are accounted for in these notations about the pretest performance (entry); and it appears that three students were not able to demonstrate the least complex skill. Therefore, we do not know what, if anything, these students *could* do. Based on how notations like these were made, it was difficult to tell who these students were and which students made progress when the mid-assessment and post assessments were given, since only student totals for each descriptor were provided in teacher notations.

Figure 1: Part of a Grade 8 Mathematics Progress Map [MA.8.9.1 Benchmark: Represent a variety of patterns (including recursive patterns) with tables, graphs (including graphing technology when available), words, and when possible, symbolic rules**] with teacher comments (in blue text) after administering the pretest to determine students' "entry levels"**

BELOW PROFICIENCY			PROFICIENT	ADVANCED
Less Complex ⟷ More Complex				
The student will:	**The student will:**	**The student will:**	**The student will:**	**The student will:**
• Determine the next 3 values in a given sequence of numbers (e.g., given the sequence "3, 7, 11, 15 …" conclude that the next three values will be 19, 23, and 27). ---------- **Entry Level (8/24/07): 8 out of 20 students** **Students are able to determine a pattern in sequence of numbers, but not able to explain that pattern in words.** **3 of 20 students were not able to determine the pattern**	• Organize the values in a given sequence using a table and/or graph (e.g., where "x-value" represents the placement in the sequence (i.e., 1 for the 1st term, 2 for the 2nd term, etc.) and the y-value represents the value of the term). [NOTE: Include different kinds of patterns, such as numerical, spatial, and recursive.] ---------- **Entry Level (8/24/07): 9 out of 20 students**	• Organize the values in a given sequence using a table and/or graph and determine the recursive pattern in the sequence (e.g., given the sequence "3, 7, 11, 15 …" conclude that the next number is obtained by adding 4 to the previous value) ---------- **Entry Level (8/24/07): 0 out of 20 students**	• Organize the values in a given sequence using a table and/or graph and be able to state an explicit rule to find the value of the nth term either symbolically or verbally (e.g., given the sequence "3, 7, 11, 15 …" conclude that the rule is y=4x-1, or an equivalent form, or verbally describing that you have to multiply the term number by 4 and then subtract 1). ---------- **Entry Level (8/24/07): 0 out of 20 students**	• Explain how a table of values can be used to determine whether a function is linear or nonlinear. Explanation should include an example to demonstrate each. ---------- **Entry Level (8/24/07): 0 out of 20 students**

Differences in how individual teachers made their notations and lack of clarity as to how to interpret the notes across three assessment/data collection periods (pre-mid-post assessments) led to the development and use of another more structured data collection tool called the Student Work Analysis tool (SWA). The Student Work Analysis tool asks teachers specific questions about which students are performing at each performance level so their progress can be tracked during the quarter. The tool also asks several more general questions about what students were able to do, what their learning needs are, and how their needs might impact instructional planning. The tool used in fall of 2007 was later revised for the spring 2008 data collection. There were several reasons for these revisions that are explained under the discussion of challenges.

Strengths of the Data Collection Tools:

What were found to be very helpful to developers were the descriptions and suggestions made by the Quarter 1 field-test teachers who wrote their observations right on the learning progressions documents. Unanticipated information was also collected in these notes. For example, several teachers mentioned weaknesses in the assessments they were using, such as this grade 1 teacher's comment, "*Assessment doesn't give students an opportunity to create their own pattern. A new assessment is being created*."

Making notes right on the progressions reminded teachers of the skills and concepts they were looking for, so they did not have to refer back to a second document when doing their coding. This strategy made the documentation efficient; thus, many teachers commented that this strategy was more useful to them than the later, more detailed SWA forms used in the third quarter. Teachers did not fully understand the Project's need to collect data in the manner suggested in the SWA, as their purposes were, in some cases, different from the needs of the developers and project leaders.

Challenges Presented by the Data Collection Tools:

As shown in Figure 1, one important missing piece when using the draft progressions for teacher notations was that there was no way to track individual student progress from the Pre- to the Mid- and then to the Post assessment. As a result, the data included only the number of students at each level (e.g., numbers of students below proficient at least complex, more complex, proficient, etc.). All that could be interpreted with the general number counts was that groups of students did move toward proficiency or to higher levels of performance and fewer students were left behind at the end. Additionally, if students demonstrated evidence other than what was described in the draft learning progression, very few teachers made specific notes about those "off-target" skills. As in Figure 1, we know what three of the lowest performing students could not do, but we do not know what they could do, if anything. In some instances, if particular performances were observed by multiple teachers, the information might have been added later as a new descriptor under "least complex" performance.

At the developers' meeting in November 2007, participants explored several alternative formats (Hess, 2008c; Hill, 2001) that might address some of the challenges in data collection when using the draft progressions. One idea that was not adopted at that time was to add additional room on the learning progressions template for additional specific

questions. In the example in Figure 2, the learning progressions descriptors run vertically down the page instead of horizontally as in the progress maps. Using this format, teachers would first note if they saw evidence in the description and include more information about: students performing below the least complex descriptor; describe what "not quite met" actually looked like in the student work samples/evidence; and add comments about the assessments used and instructional strategies needed. Using a format like this, teachers' notes could then be used to validate and revise draft learning progressions as well as inform instruction and assessment.

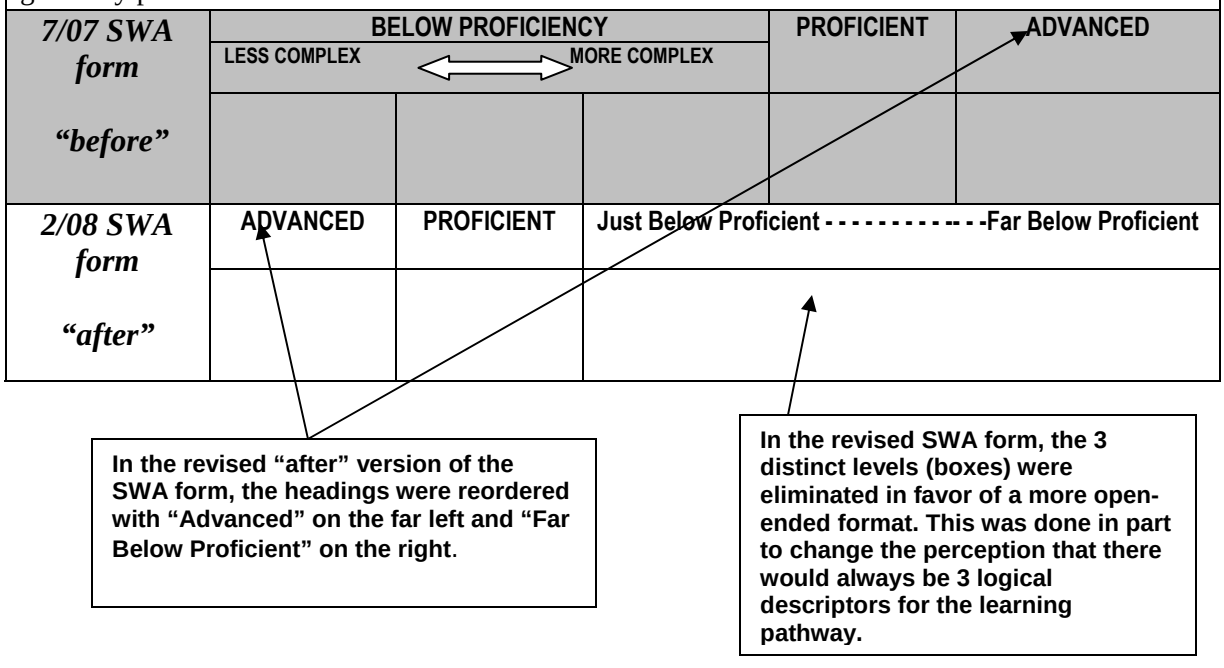
Figure 2: An alternative format using the draft mathematics progressions to collect data (**Blue text** shows the type of comments a teacher might make. This was one of several possible formats explored, but not used until much later in the project.)

Grade 6 Math Learning Progression Descriptors: **Patterns, Functional Relationships, & Algebra**	**Student work sample is "closest" to which entry level descriptor?**	**Comments about the Evidence (observed or in the student work):** *strategies-skills-concepts*	**Comments related to the assessment used**	**Comments related to next steps for instruction or support**
Advanced -Create and represent visual and numeric patterns with tables and graphs, and generalizes the rule using words and symbols.	o Met o Not quite			
Proficient -Represent visual and numerical patterns with tables and graphs and generalize the rule using words and symbols. -Describe and represent	o Met o Not quite			
More Complex -Represent visual and numerical patterns with tables and graphs -Describe in words 1-step function using generalized rule when given table of i/o values. -May or may not state rule symbolically	o Met **X Not quite**	**Students #3, #6, #7, & #8 could not go from table to graph** **Made small errors in table**	**Task did not ask for rule – need to revise assessment task**	**Students need support (scaffolding?) going from table to graph**
Moderately Complex -Represent visual & numerical patterns with tables -Complete a table of input/output values, describe how to determine the missing values, may or may not state specific rule	o Met o Not quite			
Least Complex -Represent visual patterns with tables -Complete table of input/ output values given a rule	o Met o Not quite			
Below lowest descriptor (please describe what student was able to do)	**student #2**	**Could identify a visual pattern, but not able to represent a pattern**	**Need to consider other response modes for student #2**	**Must modify materials for better access**

After reviewing the first quarter data and several alternative formats, developers with the leadership team worked on a new data gathering tool called the Student Work Analysis (SWA) tool, a modified version of a SWA form from the Santa Cruz University Teacher Mentoring Academy. It was hoped that in using this form for data collection, the descriptions of the student work from the Pre-, Mid-, and Post-assessments might provide matches or mismatches with the descriptors in the progressions to better guide the validation and revision processes. The resulting SWA tool and the data collected was successfully structured to address collecting better quality data – to identify patterns and trends for subgroups of learners and to guide teachers to determine student needs and next steps for instruction, as well as to refine descriptions of student work at the various levels of progressions.

After some preliminary use by field-test teachers during the second quarter, the SWA tool was again updated in a couple of ways. The "before" version (from 7/30/07) was modified after getting feedback from teachers and discussions between the development teams and project leaders. One of the major changes to the form was to delete the "3 distinct boxes" (see Figure 3) showing descriptions of "Least Complex" to "More Complex" and replace them with a "more fluid" box so teachers would not assume that there were always 3 distinct levels of performance. Instead of making notes directly on the Progress maps, teachers were now asked to "sort" the student evidence into piles to show a range of performance instead of simply using the three existing descriptors. The "after" version of the form (2/08) also reversed the order of the progression descriptions to mirror the way teachers are used to seeing rubric criteria (from highest performance descriptions to lowest, left to right).

Figure 3: Modifications to the Student Work Analysis (SWA) tool, used for sorting student work samples. The "after" version eliminated the 3 distinct levels to allow for teachers to determine the range of possibilities based on actual student evidence, and not be limited only to the 3 existing learning progression descriptors. The order was also reversed to reflect how rubric levels are generally presented.



Lessons Learned from Using the Common Data Collection Tools & Protocols

Data collection tools and the general process for data collection continue to be refined using input from field-test teachers and developers. The state believes that the Student Work Analysis (SWA) tool is an integral part of Hawai'i 's curriculum implementation process, which involves teachers collaboratively developing assessments and engaging in on-going monitoring and discussion of student learning. Using progress maps in tandem with collegial dialogue and formative assessment evidence between times when more formal testing occurs has been found to be a critical component of progress monitoring.

Perhaps one of the unanticipated lessons learned about facilitating the student work analysis process is uncovering a variety of individual philosophies or perceptions about what the process is and what it isn't, as well as what the overarching goal is that one is trying to achieve through the use of that process. Being human, everyone forms generalizations according to individual points of view and those perceptions sometimes stand in the way of what the larger group really needs to accomplish.

- For example, most of the participating field-test teachers did use one Student Work Analysis (SWA) form per class as directed by project leaders. For those classes, it was easy to follow the number-coded students as they moved along the progression. For those teachers who didn't follow that direction and put all students, sometimes from 2 or 3 classes on one form, tracking groups of students or an individual student across the Pre- to the Mid- and Post-assessments was nearly impossible. It is important that as new field test processes (pre, mid, and post data collections) are finalized, the stated objectives and procedures for data collection are reviewed by everyone involved, so there is greater clarity about where they are being carried out as intended, how they have been adapted, and the reasons why they have been modified.

Another important lesson learned was that even though the directions on the SWA forms ask teachers to describe only the positive/actual performance, sometimes the instructional strategies used or negative performance (what students could not do) became the focus of teacher notations.

- This also happened for the section of the form that asks teachers to describe learner needs. Often, rather than describing actual learner needs (e.g., student needs to use manipulatives, student is more successful when graphic organizer provides scaffolding for responses), the teacher simply stated aspects included in the assessment task that the student could not do. For example, instead of identifying that the learner needed to develop a better understanding how the main idea is supported by details, the teacher might list student needs as the specific skills assessed and not observed, such as "*Missing 2 or more supporting details."* Additional modeling with examples of what is intended on the SWA tool by "identify student needs" will strengthen understanding in future trainings of field test teachers and users of Progress Maps.

Teacher-Developed Data Collection Tools (Appendix B)

Additional teacher-developed strategies or tools that individuals or small groups created on their own were found by some to be useful at different times during the project. Sometimes these tools grew out of teachers' frustrations when they were not able to get at the heart of what students were learning with the common tools provided by the project; others were simply the result of an iterative process of teachers integrating their existing tools (e.g., standards-based rubrics) with project expectations and guidelines. In some cases, these "organic" tools were adopted and used by other teachers at the same grade level or in the same school. Sometimes other teachers tried these "new" tools and did not find them as helpful as the originators did.

One sample tool, developed collaboratively by third grade teachers at Pomaikai School (Maui) during the project, is included in this report to illustrate how other data collection tools sometimes evolved to address a need. Named the "trouble-shooting tool" by these teachers, this began as a more efficient means to determine student learning, student needs and strengths, and next steps for instruction. The tool's development grew out of the teachers' need to find a better way to document what they were seeing in the student work. These teachers were struggling with how to look at rather lengthy assessments (e.g., 3-4 questions requiring extended responses in reading) in a short time frame and make judgments about whether students fit into categories of proficiency, below proficiency, etc. The teachers felt it wasn't possible to "hold all the strengths and needs in their heads" across as many as 50 student papers from several classrooms.

Teachers found writing each descriptor too time consuming, so the final version of their data-collection tool listed the descriptors typically found in the pre-assessment. This ultimately saved them time in the later rounds of scoring and planning instruction. The descriptors that were documented were also useful later on when the developers were validating and revising the progressions.

The teachers determined that there would not be time for them to go back and look at every paper more closely a second time, so they began listing some of the scoring rubric criteria on the left side of the data collection page and left a blank space on the right where they could start to note student strengths and needs. This process was used during the first round of reviewing pre-assessments. Soon, some patterns began to appear, and instruction was adjusted based on what the teachers saw when reviewing student work samples together.

During the second round of assessment (the mid-assessment), teachers added a few more descriptors, but found that the first round had given them a fairly solid list. Teachers still found writing each descriptor too time consuming, so the final version of their data-collection tool listed the descriptors *typically found* in the pre-assessment. This ultimately saved them time in the later rounds of scoring and planning instruction. The descriptors that were documented were also useful later when the developers were validating and revising the progressions.

Lessons Learned from Teacher-Developed Data Collection Tools

In a project such as this, every common tool and every idea will not be seen as useful to all teachers. Customized tools that emerge from the day-to-day use of Progress Maps, like the sample tool developed collaboratively by teachers at one school, are what one should expect some teachers to create for themselves. In this situation, the tool that was created assisted teachers in collecting data for the project, as well as analyzing and scoring student work and planning their daily instruction. The state encourages all classroom teachers to use a collaborative and iterative process to ensure that all students have equal access and opportunity to reach proficient performance on the Hawai'i benchmarks and standards and expects customized or adaptations of common tools to develop as a result.

III. Data Analysis Tool (Appendix E) **and Data Analysis Protocols** (Appendix F)

As teachers collected their data in early 2008, much thought was given to how grade-level teams, representing different schools, would collaboratively make sense of the data collected. The project leadership team knew that asking teachers to wade through large piles of student work or plies of completed SWA forms was not the answer. It was decided that an outside consultant would compile individual data into a user-friendly form that could be reviewed and analyzed during the meeting (April 2008). Appendix E includes a sample data analysis form used to compile Kindergarten data for ELA from multiple teachers. In preparation for the meeting, one form was completed for each grade level and content area, using the information provided by individual teachers on their completed SWA forms. As expected, some teachers' notations were more useful than others in this process, but all were important to consider given the small sample size of students included in the study.

The data analysis protocols (Appendix F) were used to facilitate discussions during the April 2008 field-test teachers' meeting. Using the completed data analysis tools for each grade level and content area (as described above), teachers reviewed the compiled notes from several classrooms in order to make recommendations to developers about revisions to the descriptors in the Progress Maps. They were also asked to indicate which instructional strategies were found to be successful for each group of students.

Strengths of the Data Analysis Tools and Protocols: The process of having an independent consultant compile the data not only made the analysis work more efficient, but also served a second purpose - to better understand the quality of data collected. In some cases, the consultant was able to disregard extraneous information that would not be helpful during analysis, such as comments about a student being absent from school and regular attendance being listed as a "need." In the process of compiling teacher data, the data analysis protocol was fine tuned as well. In the future, the role of the outside consultant in compiling data from different classrooms might be accomplished at the

school level by a school or district leader, such as a curriculum director or Title I supervisor.

Challenges in Using the Data Analysis Tools and Protocols: Time was the key factor in getting grade-level teams to review all of the data that had been complied in order to make informed decisions about several aspects: what trends in student performance, if any, were evidenced; what content revisions were needed on the progressions; and perhaps most important in terms of long-term impact on teaching and learning, what instructional strategies seemed to be successful for students at differing performance levels. Because teachers tended to list (on the SWA forms) many more instructional strategies than the leadership team believed were actually tried with students at each performance level, a protocol was added to the analysis so that teachers would discuss and then choose from the listed strategies (by circling) *only the instructional strategies* that were found to be effective for students with those specific needs and demonstrating that level of learning.

Lessons Learned from the Data Analysis Tools and Protocols

It probably does not matter whether an individual or a small group does the compiling of data before analysis when validating descriptors in learning progressions. However, one thing is certain: compiling individual data before analysis is an essential step in identifying the most useful data. An analysis protocol like the one used in the project was central to facilitation on the actual meeting day - keeping grade-level teams focused on the multiple tasks they were asked to complete during analysis.

Few teachers took the time to document progress of specific/individual students over time. This probably was due to tracking too many students at one time. Once PMs have been validated and tools have been refined, it should be easier for teachers to strategically target struggling students and monitor their progress across the school year. A new format is probably needed to make tracking of progress of multiple benchmarks more manageable.

The lack of specific details on individual SWA data collection forms made compilation more difficult overall, as it was too late to go back and recreate that information after the fact. Perhaps more frequent informal check-ins with teachers before the final data analysis meetings to remind them to do these things would address this issue.

- Few teachers actually identified effective instructional strategies used or noted learner characteristics for different targeted students/ groups.
- Additionally, not all teachers made notations for each of the pre-, mid- , and post-assessment data collections. By the time they were using the post-assessment, more information was being collected.

IV. Project Surveys (Appendix C – Teacher Survey; Appendix D – School Leader Survey)

Two key surveys were developed to collect feedback from field-test teachers and school leaders supporting the teachers involved in the project. As with all of the tools, these also went through several refinements. One primary reason for some of the revisions was to ensure that the surveys would take as little time as possible to complete while still capturing some important ideas, perceptions, and possibly some unintended outcomes.

The school leader survey is included as Appendix D. Due to time constraints at the end of the school year, the Hawai'i leadership team decided not to ask school leaders for feedback during this phase of the project. Consequently, no data were collected about administrator perceptions and support for teachers involved in the project. Administrator support has been acknowledged as a critical factor to implementation and use of Progress Maps school wide; therefore, Phase II of the project (2009-2010) will be collecting this data through face-to-face interviews or surveys.

The field-test teacher survey (Appendix C) included statements that teachers could agree/disagree with and then explain their responses. Survey data from field-test teachers provided a range of information on:

- usefulness of Progress Maps in planning instruction and developing assessments;
- recommendations for revising the content descriptions in the PMs;
- effectiveness of the processes used in validating PMs;
- effectiveness of the tools used in validating PMs and collecting student evidence; and
- changes in teacher perceptions and general understanding of learning progressions/PMs

Strength of the Teacher Surveys: Field-test teacher surveys provided critical information on a variety of levels, from the usefulness of progressions, to content descriptors in the learning progressions, to teachers' conceptual understanding of how the progressions might be used to guide instruction and assessment, and most dramatically, their perceptions of what learners can learn.

Challenges of the Surveys: Many teachers commented on the survey about the lack of quality of their early assessments and instructional tasks. It would have been helpful if project leaders had been able to collect and analyze how classroom assessments changed over the course of the project or if they had been able to collect exemplar assessments for particular math or reading benchmarks with rubrics and anchor papers to use as models in the future.

Time constraints made it difficult to collect data from school leaders at the end of the school year. As scale-up to more schools begins, plans are being made to gather data from those at the school level supporting this work, as it is seen as a critical component of supporting collaboration and professional dialogue. School leaders, of course, include

principals, but may also include instructional and curriculum coaches and special education and curriculum leaders as well.

Lessons Learned from the Teacher Surveys

Field-test teacher surveys provided valuable information about all aspects of the first year of the project. Findings from the field-test teacher surveys are summarized below under two broad categories: how use of Progress Maps affected instructional planning and assessment and teacher perceptions of students.

Use of Progress Maps affected teachers' instructional planning and assessment strategies in several ways.

- Development of Progress Maps forced teachers to conceptualize a model of how students represented knowledge as meaningful learning progressions over a school year's time. Many teachers noted that for the first time, they "broke down" the learning benchmarks and really understood better the instructional intent as a result.
- Teacher collaboration supported development of a deeper understanding – *and a common understanding* – of the concepts and skills of grade-level benchmarks. Many teachers, who have been using these same content benchmarks for several years, admitted that they had never had these discussions with colleagues about what each benchmark meant.
- Most teachers expected too much at first. They discovered that they needed to rethink what a continuum of learning actually means (e.g., how to get to the next level vs. the end outcome).
- Teachers commented that initially they did not create assessment tasks that allowed them to observe student performance in relation to Progress Map indicators/descriptions. The experience of examining student work to collaboratively interpret and agree upon the performance evidence for subgroups along the learning continuum was invaluable to assessment development and refinement.
- Often teachers uncovered "flawed assessments" they had been previously using, noting that they found "mismatches" among rubric criteria, assessment tasks, and PM descriptors.
- Teachers found that smaller, more targeted and open-ended assessments tended to yield better information about learning.

Teacher perceptions of student learning and their expectations for the lowest performing students often surprised even the teachers.

- Once teachers became more skilled at designing their pre-assessments, they began to use the performance evidence as "entry points" to differentiate instruction. This appeared to be a new view of the purpose of pre-assessments for many of them.
- Many teachers commented that Progress Maps provided a new way to keep track of student progress, other than the traditional grade book. A typical comment made by one teacher summed it up this way, "*Now I had a visual organizer of where students were and what I had to do*."
- Progress maps provided a new way to flexibly group students for targeted instruction/support. Often teachers realized they not only had misconceptions about the lowest performing students, but also the students considered to be proficient. One field-test teacher stated that, "*It was a real eye-opener. Some students I thought were proficient were actually below proficiency according to what they could and could not do*."

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APPENDIX A: Common Data Collection Tool/SWA

Gr. Level ____

Teacher: _____ **School:** _____ **Date:** _____

Subject Area _____ **No. of Students in the class:** _____

ELA/Reading or Mathematics Program (s) used at your school:

_____

Benchmark(s): Code Number for Benchmark(s) [e.g. MA3.2.1]_____

This Student Work Analysis/SWA is for (√) one or more:

English/Language Arts (ELA)	Mathematics
( ) **Literary Elements [L]**	( ) **Patterns & Functional Relationships [PF]**
( ) **Personal Response [P]**	( ) **Numeric & Algebraic Representation [NA]**
( ) **Interpretive Response [I]**	( ) **Rates of Change [RC]**
( ) **Critical Response [C]**	

Type of Assessment: Check (√) one:

Pre-Assessment ( ) "ENTRY LEVEL" (pre-test)
Mid-Quarter Assessment ( ) Midpoint of Quarter
Post Assessment ( ) End of Quarter

Please CLIP the following items together:

1) **One (1) Student Work Analysis Form:**
   [ELA: Literary Elements, Personal, Interpretive & Critical Response]
   [Mathematics: Patterns & Function Relationships, Numeric & Algebraic Representation, & Rates of Change]
2) **Copy of Assessment Task**
   i. Pre-Assessment—"ENTRY POINT"
   ii. Mid-Quarter Assessment
   iii. Summative Assessment: At the end of the series of lessons or unit
3) *One (1) class set of Copies* **of Student Work from the Assessment:** for this assessment task (IF work is reproducible) (IF work is logged on an observation sheet, a copy of each observation sheet for each student, or other record of student work)
4) **Assessment Tool: (**e.g. rubric, criteria checklist or any evaluation criteria tool used to assess student work)

NOTE:
Please have **Student Release Forms** signed by their parents/guardians on file for your entire class.

4-Step Rating Process:

(1) List criteria and evidence you are looking for in the student work/performance that demonstrates PROFICIENT ATTAINMENT of the benchmark(s). [If rubric and/or Criteria checklist is available, write: "*SEE ATTACHMENT"***

DESIRED CRITERIA	DESIRED EVIDENCE

(2) Select samples for analysis.

A) SORT the students' work into **3 piles:**
Proficient Just Below Proficient Far Below Proficient

B) Resorting:

- **ReSort** the **Proficient** pile into Advanced and Proficient (If Advance work is present)
- **ReSort** the **Just Below Proficient** pile into 2 or more piles based on *common characteristics* of the student work (If the pile all share similar characteristics resorting is not necessary)
- **ReSort** the **Far Below Proficient** pile into 2 or more piles based on *common characteristics* of the student work (If the pile all share similar characteristics resorting is not necessary)

[During the process of Re-Sorting---discuss any student work that appears to be "outliers" from any of your groupings (piles)]

C) Separate the **Just Below---Far Below** Section into the number columns to match the number of groups you have for this section.

D) WRITE the CODE NUMBERS for each student in the appropriate columns
OPTIONAL: You may write the student names to the right of their code numbers in the appropriate columns

E) IDENTIFY 1, 2 or 3 student(s)' work that is/are *typical* of that particular level for each column. **CIRCLE** the student(s) number(s) for each column. [You will be referencing these papers for the rest of the analysis though looking at any of the other student work within a level is still an option.

F) DIVIDE the **Below Proficiency Section into as many columns** as the number of levels (piles/stacks) you have for this section. **Divide** the same Below Proficiency section into the same number of levels for the following 3 parts of the analysis form.

WRITE the CODE NUMBERS for each student in the appropriate column

ADVANCED	PROFICIENT	Just Below Proficient - - - - - - - - - - - - - - - - - - -Far Below Proficient

(3) Respond to the following prompts based on the SELECTED STUDENT PAPERS that show TYPICAL PERFORMANCE for that particular level.

A. Describe the (OBSERVED EVIDENCE) performance on the student work.. (State what is "CORRECT" with the student work rather than what is not correct)

ADVANCED	PROFICIENT	Just Below Proficient - - - - - - - - - - - - - - - - - - -Far Below Proficient

B. What are the learning needs of the students you've identified?

ADVANCED	PROFICIENT	Just Below Proficient - - - - - - - - - - - - - - - - - - -Far Below Proficient

MID-QUARTER or POST ASSESSMENT only: (Reference planned instruction listed previous SWA form for Pre- or Mid-Qtr Assessment Task

* List any instructional strategies/tasks previously planned that were 1) Used as described OR 2) changed in any way and tell how it may have affected student learning.

* List any added instructional strategies to previously planned (from previous SWA Session) and tell how they may have affected student learning

ADVANCED	PROFICIENT	Just Below Proficient - - - - - - - - - - - - - - - - - - -Far Below Proficient

Now proceed w/ Part C. What strategies will you use to further students' learning? [Consider how students can show what they know in a **variety of ways** without compromising the criteria for proficient attainment of the benchmark(s)]

Note: Look for patterns and trends (within and among the Learner STRENGTHS & NEEDS to inform next steps…within and across levels

C. What strategies will you use to further students' learning? [Consider how students can show what they know in a **variety of ways** without compromising the criteria for proficient attainment of the benchmark(s)]

ADVANCED	PROFICIENT	Just Below Proficient - - - - - - - - - - - - - - - - - - -Far Below Proficient

NOTE: Determine & document instructional strategies that could benefit the whole class, several different level groups, a specific level group and/or individuals.

(4) Determine possible affects of the assessment task design on students' work results

1) Possible CAUSES for the student work results as shown from this assessment.

2) Recommendations for Assessment Task(s) Adjustments to assure more accurate student performance data in subsequent assessment(s)

ADVANCED	PROFICIENT	Just Below Proficient - - - - - - - - - - - - - - - - - - -Far Below Proficient

APPENDIX B: Data Collection Tool Developed by Teachers at One School

Troubleshooting Frame – Reading Response and Analysis
(used to collect information after first assessment)

Name/No. _____#1_____ Grade/Teacher: ____3 Stack_____

Type of Error	Sample Errors
Literary Elements 3.3.3 o Explain Figurative/Literal o Similes o Idioms Personal Stance 3.3.4 o Opinion (fiction) o Recommend/not o Favorite/least favorite character Interpretive Stance 3.3.1 o Explain how main ideas/events develop message. o Compare characters, setting, plots story to story	3.3.2 o Lacks language of comparison o Compares different qualities o ~~Less than 2 alike and 2 different~~ (none) o Separation of contrasted items o 1st (character) presented with example, 2nd only compared by saying, "___isn't." o ~~Items compared are trite (short hair, long hair)~~ o Items compared refer to picture rather than text o Inaccurate reference to text o ~~Incomplete~~ o Only one (character) mentioned o Overlapping or confusion of texts o ~~Not attempted~~ o Misunderstood question 3.3.4 o Retelling rather than opinion o Less than required items o Misunderstood question 3.3.3 o Contains aspect of (soup-warm), but no direct reference to qualities of thing being compared o Missed point altogether Other o Misunderstood question
	Able to Do o ~~Restate question~~ o ~~Use examples from text (refers to text)~~ o Simple details o ~~Compare important qualities~~ o ~~Use both to compare~~ o ~~Use of transition words (also, last)~~ o State and support opinion o Make reference to (noodleness) quality being compared o Voice o ~~Elaboration~~ o Draw idea o ~~Communicate in writing~~

Note: This is the form used by teachers at one school to gather information from each student at the third grade. After individual information was gathered, group data was collected to look for trends. This sample has been filled in to show what the teacher saw in the students' work on the assessment.

APPENDIX C: Teacher Survey

Field-Test Teacher Survey

1. The CONTENT of the Learning Progressions (LPs) was *USEFUL* in clarifying my understanding of what a student might look like "along the way" to proficient attainment of the grade level benchmarks. Please explain and/or provide examples to support your response.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

2. The CONTENT of the (LPs) was *USEFUL* in developing assessment criteria, rubrics, and assessment tasks for students "along the way" to proficiency. Please explain and/or provide examples to support your response.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

3. The CONTENT of the LPs were *USEFUL* when PLANNING for instruction for students "along the way" to proficiency. Please explain and/or provide examples to support your response.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

4. The CONTENT of the LPs were *USEFUL* when IMPLEMENTING instruction for students "along the way" to proficiency. Please explain and/or provide examples to support your response.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

5. My understanding of the concept of learning progressions has changed *in some ways* from the beginning of my involvement in the project to my thinking now? Please explain and/or provide examples to support your response.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

APPENDIX D: School Leader Survey

School Leader Survey

1. **What is your current "official" position at the school?**

   - o Principal
   - o Assistant principal
   - o School curriculum coordinator/curriculum developer
   - o District curriculum coordinator/curriculum developer
   - o literacy or numeracy coach
   - o staff development specialist
   - o department chair
   - o mentor teacher
   - o other (please describe):

2. **How would you describe your role in supporting Field Test (FT) teachers in your school during the Hawaii LP Project? (Check all that apply.)**

   - o Providing time for teachers to meet
   - o Providing substitutes/coverage for teachers to have released time related to project
   - o Providing additional resources for teachers to implement LP project, specific lessons, or assessments
   - o Acting as a Mentor – as a curriculum/instructional specialist
   - o Acting as a Mentor – as an assessment specialist
   - o Attending curriculum/lesson planning meetings with teachers
   - o Attending student work analysis meetings with teachers
   - o Facilitating curriculum/lesson planning meetings with teachers
   - o Facilitating student work analysis meetings with teachers
   - o Locating available resources (please describe):
   - o Other (please describe):

3. **What have you seen as the greatest impacts as a result of teachers' participation in the project? (Please feel free to elaborate on any that apply.)**

   - o curricular planning at the school?
   - o teaching/instruction/lesson planning?
   - o their view of students/student learning?
   - o their approach to/understanding of formative and summative assessment?
   - o Collaboration?
   - o Other?

4. **To what degree would you agree with the following statements? (circle response and feel free to add comments that explain your response)**

a. Teachers have benefited from collegial discussions about how children learn.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

b. Teachers have benefited from looking at and analyzing student work/ assessment data *with colleagues.*

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

c. Teachers' attitudes about *low* performing students have changed as result of this work.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

d. Teachers' attitudes about *average* performing students have changed as result of this work.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

e. Teachers' attitudes about *high* performing students have changed as result of this work.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

f. Teachers have <u>struggled with</u> developing high quality *formative assessments.*

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

g. Teachers have <u>improved</u> their ability to develop high quality *formative assessments.*

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

h. Teachers have <u>struggled with</u> developing instruction that targets specific learning needs.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

i. Teachers have <u>improved</u> their ability to develop instruction that targets specific learning needs.

Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree

5. **What have you seen as the teachers' greatest challenge(s) during this project and how have you or the teachers addressed it?**

6. **Are there any plans to sustain, expand, or enhance use of learning progressions in any way at your school? (Feel free to elaborate on your response.)**
   - **Yes**
   - **Perhaps?**
   - **no**
7. **What else would you like to share with us? Is there anything we haven't asked about that you'd like us to know about your school's involvement with the LP project?**

ELA	Common Characteristics seen in work samples by grouping			*Perceived* Learner Needs	Instructional Strategies & Supports	General Progress
Grade Level: K	**Pre-assessment notes**	**Mid quarter assessment notes**	**Post quarter assessment notes**		**Strategies tried** **Circle the most effective ones**	**Describe progress made by most students in each grouping**
Farthest below proficient	attempts to write or draw responds orally		-Attempt to draw, tell, or write response -OR Drew a char Draws some event/ picture in story	**PRE:** Needs visual cues/or choices Oral lang dev **M:** **POST**: vocab "character" & "setting" language dev; use picture cues; simple sentences; distinguish EVENT from setting; distinguish char from setting; sequencing	Sequence/sort picture cards Simplify/break down task Visual cues/choices Drama, Role play, Visual arts Chart setting examples when read aloud Point to select choice Teach criteria/model bubble chart-main character Kid-friendly rubric Picture cues Simpler story "Wave" poster- draw favorite scene	**APPENDIX E: Example of "prepared" Data Analysis Tool – data on this form represents multiple Kindergarten teachers' data to be analyzed by the group**
Far below proficient	attempts to write or draw describes story event that included characters		-Named char in event -Draws some aspects where story took place; vague verbal response Draws/tells about some event in story -stated some facts from story; sequencing incomplete or inaccurate	**PRE:** Lacks und of concept of setting Lacks lang/vocab Lacks detail in oral & drawing **M:** **POST**: vocab "character"; respond in complete sentence; distinguish char from setting; see whole of story & break it down	Work on "middle" Iden character/focus=names Teach criteria-main character Sequencing picture cards Adding details Use music to retell Drama, Role play, Visual arts Chart setting examples when read aloud Teach criteria/model bubble chart-main character Kid-friendly rubric Picture cues "Wave" poster- draw favorite scene	

Grade Level: K	**Pre-assessment notes**	**Mid quarter assessment notes**	**Post quarter assessment notes**	***Perceived* Learner Needs**	**Strategies tried** **Circle the most effective ones**	**Describe progress made by most students in each grouping**
Below proficient	Some facts Know something about sequencing Draws setting Describes "where" (setting) Iden some characters		-Name/draw some main char -Draws setting OR & tells where story took place (some inaccuracies) -events sequential but inaccurate; some understanding of story; sequences ONE event (but not story)	**PRE:** Incomplete or inaccurate sequencing Limited story understanding Lacks language/ vocabulary Needs clarification **M:** **POST:** draw/ name/write all main char; vocab "character"; distinguish char from setting; see whole of story & break it down	Iden character/focus=names Teach criteria-main character Sequencing picture cards Adding details Use music to retell Drama, Role play, Visual arts Chart setting examples when read aloud Teach criteria/model bubble chart-main character Kid-friendly rubric Picture cues "Wave" poster- draw favorite scene	
Just below proficient	Stated facts Brief ideas Events sequenced Few details Some understanding of story Describes "where" (setting) Iden characters		-Named most main char -Draws setting OR & tells where story took place -events sequential but inaccurate; some understanding of story; sequences ONE event (but not story)	**PRE:** Needs clear und of main vs. secondary characters **M:** **POST:** draw/ name/write <u>all</u> main char; distinguish main-secondary char;	Iden character/focus=names Teach criteria/model bubble chart-main character Kid-friendly rubric Sequencing cards Adding details Use music to retell Use cues – what to notice Chart setting examples when read aloud Turn & talk Drama, Role play, Visual arts Picture cues	

				distinguish char from setting; lacks details; sequence more than one event/whole story (B-M-E)	"Wave" poster- draw favorite scene exemplars	
Grade Level: K	**Pre-assessment**	**Mid quarter assessment**	**Post quarter**		**Strategies tried** **Circle the most effective ones**	**Describe progress made by most students in each grouping**
Proficient	Sequenced B-M-End Main characters identified Complete ideas; impt ideas Understanding of story Know term "setting"		-Named drew, wrote all char -Draws & tells where story took place -name/drew sequence of events (B-M-E)	**PRE:** Needs clear und of main vs. secondary characters **M:** **POST:** criteria of what is a char; what is setting; distinguish significant event; more details	Teach criteria-main character Big idea/ summarizing Teacher Models retell &Shared retelling Drama, Role play, Visual arts Chart setting examples when read aloud Teach criteria/model bubble chart-main character Kid-friendly rubric Picture cues "Wave" poster- draw favorite scene exemplars	
Advanced	Iden/describe main char & elements of setting Knows term "setting" Made inferences		-Can name all char Stated at least one criteria of what is a character -able to draw setting; knows vocab "setting"; states how they knew it was setting -names events in sequence (B-M-E); chooses	**POST:** begin to infer/describe char; t-t, t-s, t-w connections	Drama, Role play, Visual arts Chart setting examples when read aloud Teach criteria/model bubble chart-main character Kid-friendly rubric "Wave" poster- draw favorite scene exemplars	

			significant events; summarizes		

APPENDIX F: Data Analysis Agenda & Protocols for grade-level teams

Approximate Times	Data Analysis Steps	ELA Examples	Math Examples
10:30-12:00 **Part 1. Analysis of Data by grade groupings and content area**	**1. review assessment characteristics (for three assessments) <u>for each grouping</u>** Farthest below proficient Far below proficient Below proficient Just below proficient Proficient Advanced	Nothing to write – think about differences among student groupings Were all assessment data useful? (E.g., some teachers said the pre-assessment did not yield good data and therefore assessments were revised.)	Nothing to write – think about differences among student groupings Were all assessment data useful? (E.g., some teachers said the pre-assessment did not yield good data and therefore assessments were revised.)
	2. Is there anything to clarify in the observed characteristics from assessment data?	FT teachers <u>for that grade</u> will lead this & clarify for others	FT teachers <u>for that grade</u> will lead this & clarify for others
	3. <u>Generalize</u> learner needs for each grouping – state specifics in more general terms if possible ("this is true of most students…) • <u>Keep to essence</u> – handwriting and spelling might be needed, but they are not about "response to literature" • <u>Not behavioral</u> – paying attention is important, but does not belong here • <u>Focus on conceptual understanding</u> – *not only terms*	**For example: Gr 1 ELA Needs** (color coding shows comparable descriptors) **Farthest below proficient** CAN respond in drawing or writing Making personal connections to character/story Concept of character & setting **Far below proficient** CAN iden character Making personal connections to character Concept of char & setting & how to describe	**For example: Gr 7 Math Needs** **Farthest below proficient** CAN recognize patterns & solve 1-step linear equations algebraically with minor errors Make connections between table and graphs Use words & symbols **Far below proficient**

	• Connect to what they CAN do Examples: Can identify details, but have trouble organizing details or examples.	**Below proficient** CAN identify character + event Making personal connections to character Determining important information to describe char **Just below proficient** CAN iden character + event Lacks descriptors **Proficient** CAN iden character + event use OWN words to describe char & setting; more descriptive words/details **Advanced**	
	4. describe general progress made by each grouping in that grade level		
	5. Compare progress of groups in that grade level – did the "farthest" group move towards the middle of the LP? How did the middle (below proficiency) group make progress?		
	6. What, if any compelling insights do you see when you compare progress of groups in that grade?		
	7. repeat process for each grade level's data		
Part 2. Share Summaries of Analysis of Data across grades by content area	8. How do these summary findings compare across grades?	**"Our" data** – many K, 1 & grade 2 students were not able to identify setting, but could identify character and story events	
	9. How do these summary findings compare to outside LP resources? (provided to each group). Groups will get	**Outside research-based LPs:** Students generally are not able to identify setting until end of grade 2!	**Outside research-based LPs: (First Steps)** Need to understand equal units on grid &

	examples of other research-based LPs and see if they shed any light on what HI teachers found.		how scale helps to describe changes (level 2) Describe & compare quantities in bar graphs and Venn diagrams, but may not be able to represent data in continuous scale or interpret meaning between marked intervals (level 3) Create axes showing discrete or continuous data, but may not be able to covert data to make comparisons (level 4) Produce wide range of data displays, represent interpret data displays showing relational information (Level 5)
	10. What are the implications for revisions? For example, for the 2 "farthest below" levels, can you suggest wording that includes what they can do with support (e.g., using graphic organizer…)	**Perhaps…** • Identifying setting is unrealistic for grades K & 1 • Focus on character + story events • Ask direct questions about "where" instead of teaching the vocabulary of "setting" **LP revisions should address these insights**	
Part 3. Identify more/less Effective Instructional Supports & Assessments	**11. List or identify (circle) effective instructional strategies used for each student group YOU worked with**	What instruction/scaffolding was actually used for each grouping of students? • Cross out strategy if not used • Add other strategies used • Circle MOST effective strategies	**Gr 7 example** Some teachers made notes, such as, "moved away from real-life situations to focus on tables, graphs, equations (y=mx+b)"
	12. Make connections between learner attributes and effective/ineffective practices – why were they effective?	Learner needed to organize information – used consistent graphic organizer	
	13. Identify assessment "aces" YOU tried – did some work better than others? Why? Why not?	E.g., Instruction/assessment was more effective when there was a prewriting graphic organizer to compare & contrast characters	