

Alternative Assessment for Colorado's Information Literacy Guidelines: Interim Report on the 1994-95 AASL/Highsmith Research Award Project [*assess*]

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Introduction

This article is an interim report on alternative assessment measures for Colorado's Information Literacy Guidelines (Ponis, Walster, and Welborn 1994). A brief overview of the development of the guidelines, their contents, and the implementation process is followed by a discussion of how alternative assessment measures will be created. Implementation and analysis of data will continue into the 1995-96 school year. The outcome of this project will be a set of alternative assessment measures for one of Colorado's Information Literacy Guidelines; administration and implementation guidelines and sample data on administration results across schools. In the future, alternative assessment measures will be developed for all five of Colorado's Information Literacy Guidelines.

Overview of Colorado's Information Literacy Guidelines

Information Literacy Guidelines in Colorado are written from the perspective of student outcomes. They indicate what the student will be able to accomplish when he or she has learned the processes embedded in the guidelines. The five guidelines are:

1. The student constructs meaning from information.
2. The student creates a quality product.
3. The student learns independently.
4. The student participates effectively as a group member.
5. The student uses information and information technologies responsibly and ethically.

(Information Literacy Guidelines 1994, 1)

Outcomes-based education, performance-based education, or student-centered learning have all been influential in changes occurring in Colorado schools. These Information Literacy Guidelines were written to provide library media specialists across Colorado with a framework for developing district and building-based implementation and integration. They are advisory, not state mandated. They can be adapted, adopted, or used as necessary within the local needs of a school, a cluster, or a district.

History of the Development

Content standards have been mandated by the Colorado State Legislature. While content standards were in the developmental stages it seemed appropriate to gather together individuals interested in information literacy and create state-level guidelines that could be integrated with content standards. During the summer of 1993, a three-day retreat was held, sponsored by the Colorado State Library and Adult Education Office. Participants included building and district-level school library media specialists, public librarians, Colorado State Department personnel, and representatives of library education. Information literacy guidelines, information skills curricula, and information retrieval processes from across the country and within Colorado were consulted in the construction of these guidelines.

The results of this retreat were the development of the five information literacy guideline areas listed above, and the formation of five writing teams to continue the work of developing specific indicators for each of the guidelines. Overall indicators were approved by the group during the retreat. Writing committees worked for the next year to review and revise the original indicators. During this process, students, teachers, parents, and members of other standards writing teams were consulted about the content of the guidelines. During spring of 1994, the five revised guidelines were submitted to an overall writing team to standardize the language and structure across guidelines. Guidelines were again submitted for comment and review to a cross-section of the population. Drafts of the guidelines were circulated from fall 1993 through fall 1994 by the State Library and Adult Education Office of the Colorado Department of Education and by the Colorado Educational Media Association. The revised document was printed and distributed in final its version in December 1994 (*Information Literacy Guidelines 1994*).

Guideline Content

A brief overview of all five guidelines are provided below to help understand how they function together to create an information literacy program. Guidelines can be applied individually or together within any content area. Neither the guidelines nor the indicators are meant to imply linear sequencing. They can be implemented and practiced in any order.

Guideline One is the knowledge-seeking process. It is discussed in detail below.

Guideline Two focuses on students creating quality products. It includes recognizing quality, planning, creating, presenting, and evaluating. Library media specialists work in conjunction

with classroom teachers to help students create, evaluate, and revise products to develop quality.

Guideline Three suggests the importance of students developing independent learning skills through the use of information. It includes students developing voluntary skills for deciding on what information is important to them; deciding what they will read, view, or listen to; exploring areas of personal interest; and developing personal guidelines for satisfaction. Independent learners are lifelong learners who make choices based on their own criteria and needs.

Guideline Four acknowledges the increasing need in our society to process information through group interactions. It includes helping a group determine an information need, sharing responsibility for planning, collaborating to identify relevant information, acknowledging the contribution of diverse ideas, offering information to the group, clear communication within the group, and evaluating as a group.

Guideline Five discusses the importance of making ethical and responsible information decisions. It includes practicing ethical use of information, respecting intellectual freedom, following guidelines for the use of electronic resources, maintaining the physical integrity of information resources, and recognizing the need for equal access to information.

Uses of Colorado's Information Literacy Guidelines

Colorado's Information Literacy Guidelines were designed to be applicable to all levels of use from early childhood through adult education, in all districts in Colorado. To help disseminate the guidelines and develop integration with subject content standards, a grant was written to the Federal Department of Education: OERI Institute program (Welborn and Bolt 1994). During the summer of 1994, 59 school media educators from all geographical regions in Colorado participated in an intensive summer institute. They became supertrainers for the state of Colorado in the integration of information literacy guidelines with content standards. During the fall of 1994, a statewide teleconference was held to disseminate the role of supertrainers and basic information literacy information to 17 sites and approximately 400 participants across the state. Principals, teachers, school library media specialists, and parents attended the teleconference. In addition, a videotape version of the teleconference is available through regional library systems in Colorado.

Throughout the course of the 1994-95 school year, supertrainers are engaging in diverse dissemination activities. They are intensely involved in education, lesson development, and integration with content standards in their own districts. They are also delivering workshops and mentoring districts and individuals outside their districts. They keep in contact with other supertrainers through electronic mail accounts and periodic meetings. Other libraries and educational institutions have approached supertrainers for guidance including public libraries, community colleges, and universities. Information literacy guidelines are being integrated into teacher preparation classes in some parts of the state. Sample lesson plans are being developed and will be available on a statewide Resource Bank CD-ROM, which is currently in the beta testing stage. The assessment measures developed for this project will also be made available through the Resource Bank.

Guideline One: The Student Constructs Meaning from Information

This guideline is the cornerstone of most information literacy models, information skills taxonomies, and information programs. The content varies in minor ways from program to program and includes different numbers of steps or indicators. Overall, the process embedded in this guideline is seen by school library educators to be fundamental in the development of student's lifelong information literacy. It was chosen as the first guideline for developing alternative assessment measures. In examining the relationships between the guidelines it was also evident that parts of the other guidelines were contained in Guideline One. The development of measures for this guideline might provide seeds for the development of measures for other guidelines. Guideline One reads as follows:

The student:

- Determines information needs
 - states the purpose
 - explores options
 - defines a manageable focus

- Develops information-seeking strategies and locates information
 - Frames appropriate questions
 - Identifies likely resources
 - Uses a variety of strategies
 - Builds a reasonable timeline
 - Makes ethical decisions (See Guideline 5)
 - Records bibliographic information

- Acquires information
 - Questions others
 - Listens actively
 - Queries electronic resources
 - Reads for significant details and concepts
 - Views for significant details and concepts
 - Extracts appropriate details and concepts

- Analyzes information relative to need
 - Identifies criteria in terms of authoritativeness, completeness, form, relevance, point of view, reliability, timeliness
 - Applies criteria to information
 - Retains only appropriate material

- Organizes information
 - Creates outlines, storyboards, or graphic organizers
 - Assembles material to meet information need
 - Credits appropriate sources

- Processes information
 - Integrates information from a variety of sources
 - Makes inferences
 - Draws conclusions
 - Constructs meaning
 - Builds connections to prior knowledge

- Acts on information
 - Answers a question
 - Satisfies a curiosity
 - Takes informed action
 - Develops a product
 - Solves a problem
 - Presents information

- Evaluates process and product
 - Determines level of product success (See Guideline 2)
 - Identifies strengths and weaknesses
 - Develops a plan to continuously improve the process

(Information Literacy Guidelines 1994, 3)

Developing Alternative Assessment Tools

This project is in the beginning stages of developing alternative assessment tools. One of the significant issues the development team is grappling with is the process nature of the guideline. It is composed of discreet and measurable pieces, such as the ability to create a timeline or to credit an appropriate source. It is also an overall process that can be learned with varying degrees of complexity and depth. In addition, library media specialists in Colorado believe that this is not a linear and sequential process. The process can be used in any order and with varying degrees of complexity. All pieces do not have to be used all the time. Measures need to be created that can be applied to the discrete steps and to the overall process. In addition, the measures must allow for flexibility as students apply the process.

Sample Assessment Tools

In this section, the development of one assessment tool is discussed: criteria and a rubric for examining the process of how students construct meaning. The tool has not yet been field tested or verified. Therefore, library media specialists should use caution if they decide to apply this version to their own situation. Its inclusion in this report is to provide an example of measures that will result from this project.

One of the crucial issues in the development of assessments is the language used to indicate what is expected. For example, in describing what is expected of students in determining an information need, the statement could read:

- The student asks a question.
- The student composes a question.
- The student states a problem.
- The student determines an information need.

Each of these would be valid interpretations of the indicator and each has different meanings and connotations for students, media specialists, teachers, and evaluators. If "the student asks a question" and, in the process of discussing it with a student, the evaluator heard, "I need timelines for the Vietnam War and World War II so I can compare what happened," no question has been asked and yet the student has determined a need and stated a clear problem. A narrow interpretation of the skill would indicate the student has not demonstrated the ability to create an information question. The examples below use different language in the construction of skills processes. Through field testing, information about interpretation of language use and guides administration will be developed.

Another issue in the development of assessments for the overall process relates to scope, depth of knowledge, and student age or ability. It would not be expected that preschool, kindergarten, or first-graders should be able to complete all components in Guideline One at the depth indicated. Some elaboration of the process from simple to complex would be more appropriate as students gain skills and practice. The following three stages have been suggested for measuring the process:

• **Stage 1: Simple Process**

- Ask a question.
- Find a resource related to the question.
- Provide a response to the question.

• **Stage 2: Advanced Process**

- Determine an information need.
- Develop a search strategy.
- Chooses resources related to the problem and search strategy.
- Sort relevant from irrelevant information.
- Provide response to information need.

• **Stage 3: Complex Process**

- State a problem.
- Develop a strategy.
- Choose resources.
- Sort information.
- Organize information into meaningful sequences.
- Solve the problem.
- Evaluate the effectiveness of the problem solution.

In evaluating the process, rubrics can be created and evaluative criteria operationalized in different ways. They can include numerical scores, word definitions, short or long explanations, and different numbers of categories. A possible rubric for Stage 1 (described above) is offered

below. This is an example of what is possible. Further development and field testing will be completed through this research project.

Stage 1: Simple Process Rubric

- 0 Off task: does not create a question or select a resource.
- 1 Completes two of the three components but question, resources, and answer do not match.
- 2 Completes all three components: only one piece, either the resource chosen or the answer, is appropriate to the question asked.
- 3 Completes all three components: resource is relevant and answer is appropriate to question.

In addition to the development of alternative assessment measures, there are multiple methods for the administration of the same skills and evaluation criteria. Students, teachers, parents, or school library media specialists could evaluate students' abilities on the processes listed above. The demonstrations of the skills could be oral or written, formal or informal, within the context of a library activity or in the classroom. They could require repeated measures over time or focus on one outstanding example of applying the process. Many of these issues will be explored in the ongoing process of this research project. Examples of various ways to administer, observe, and collect information will be provided in the final report.

Other types of alternative assessment that will be explored include checklists, portfolios, timelines and process lines, observations, group discussions, charts, and think-alouds. In addition, students, teachers, media specialists, and outside evaluators will be considered for both administration and evaluation of the assessment measures. The intent of this project is to provide a wide variety of alternative assessment measures and to examine their implementation in real settings to evaluate strengths and weaknesses of use by various groups.

Proposed Implementation and Analysis Process

The implementation process proposed for this project is simple and direct. The created assessment tools will be used in school library media centers. The tools will be evaluated for effectiveness and usefulness with a variety of methods, including student, teacher, media specialist, and researcher commentary. Administration guidelines will be developed. Both assessment measures and administration procedures will go through at least one revision and retesting before publication.

Analysis will focus on two issues. Which of the assessment tools were more effective and useful? The other issue is related to what was assessed. Pilot information on the results of the assessments will be presented to provide some guidance for future development of alternative assessment measures. In other words, what did these assessments find out about students information literacy skills and abilities? Interactions between assessments, student characteristics, and school characteristics will be considered.

Conclusion

The alternative assessments developed in this project can serve as both applications for immediate use and as models for the development of other alternative assessment measures. They are a beginning step in the creation of alternative assessment measures for all five of the Colorado Information Literacy Guidelines. Development of further measures will continue predominantly through efforts of local districts and building librarians. The focus for further research will be the continued collection of these assessments and their impact on school library media programs. Questions that might be addressed include:

- Do alternative assessment measures capture significantly different information than standardized and traditional testing measures?
- Can alternative assessment measures be effectively created through student generation?
- Do alternative assessment measures give an accurate and reliable picture of student learning, both in the short term and over extended periods of time?
- How effective is the integration of information literacy into a portfolio process in raising understanding of the impact of information literacy on student's learning?
- How can alternative assessment of students provide information relevant to the development and revision of school library media programs?
- What is the interaction between the time to develop and administer alternative assessment and the benefits obtained? In other words, does alternative assessment have a significant cost/benefit advantage?

Within Colorado, school library media specialists hold strong beliefs that information literacy is critical to student's learning during the schooling process and over a lifetime. The development of alternative assessment measures is designed to help reinforce those beliefs with material evidence. The statement of philosophy from the introduction to the information literacy guidelines most eloquently indicates what Colorado library media specialists wish to find through assessing student's information literacy skills.

Information literate students are competent, independent learners. They know their information needs and actively engage in the world of ideas. They display confidence in their ability to solve problems and know what information is relevant. They manage technology tools to access information and to communicate. They operate comfortably in situations where there are multiple answers, as well as in those with no answers. They hold high standards for their work and create quality products. Information literate students are flexible, can adapt to change, and are able to function independently and in groups (*Information Literacy Guidelines* 1994, 1).

References

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