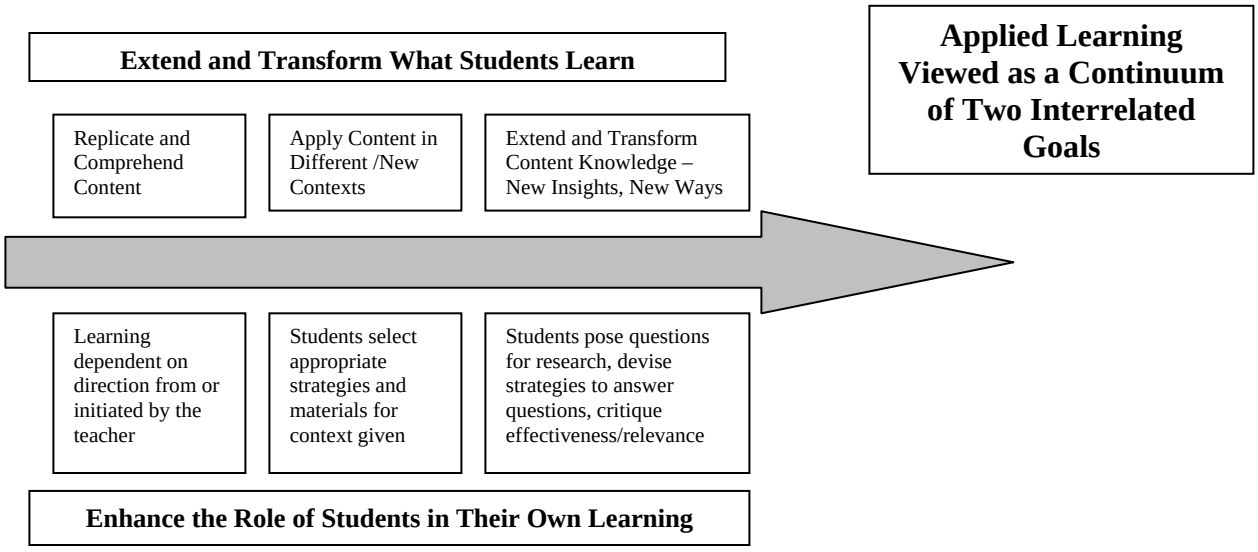
An Overview of Rhode Island's Applied Learning Standards

Performance Indicators Developed by Karin Hess

The term, "Applied Learning," means many things to many people. The Applied Learning standards focused on for the Rhode Island high school diploma requirements describe essential cognitive skills and activities involving students dealing with content in new or complex ways and, more particularly, with students being able to take increasing responsibility for directing their own learning. There are two major principles behind these standards:

1) **Extend and Transform What Students Learn**: Students should be able to go beyond replicating what they have learned as specific content in limited contexts. Students should also learn how to develop new insights and create knowledge, use existing knowledge in new ways, communicate knowledge effectively, and realize when knowledge is incomplete or inconsistent. Applied learning teaches cognitive skills and activities that are involved in the extension, transformation, and evaluation of knowledge—primarily, but not limited to problem solving, research, and communication.

2) **Enhance the Role of Students in Their Own Learning**: Students should take increasing responsibility to direct their own learning--as contrasted with students becoming ever more proficient at doing what teachers direct them to do. For this reason, applied learning includes those cognitive skills and activities associated with this change in role—primarily, but not limited to critical thinking, reflection, and evaluation.



The Applied Learning standards document provides examples of what the cognitive skills and activities might look like for Critical Thinking, Problem Solving, Research, Communication, and Reflection and Evaluation. For each of these main areas, brief statements are provided with examples of how the student might interact with content

(applying and extending knowledge), relate the learning to her/himself, or relate the learning to work with others.

A Caution

The listing of examples for each area/criterion of applied learning is not meant to be exhaustive. It is *not* the intent that a student has to demonstrate every "bullet" on each list in order to meet the high school diploma proficiency requirements. Thus, the examples are intended to help teachers and students think productively about what applied learning can look like in different contexts. This document should not be used as a simple "checklist" for constructing discrete learning activities either; true applied learning will integrate multiple and complex skills, perhaps in novel ways, when engaging more deeply with content.

Implications for Learning and Teaching

Students will develop these "applied learning" skills gradually over time, under instructional methods more like those exercised in an apprenticeship than like those exercised in direct teaching of much academic content (i.e., through lecture, assignments, or discussion). In an apprenticeship, a teacher provides instruction along with many opportunities for applying that instruction under the guidance of the teacher. The combination of instruction and guided application is calculated to help students move from where they are to the more independent and complicated proficiencies they need by the time they graduate from high school. Many of these "applied learning" skills may be demonstrated through their Graduation Exhibitions, Graduation Portfolios, Senior Capstone Projects, or other performances of substantial learning that is chosen, directed, and carried out by the student.

In selecting this focus for the high school diploma system, it is essential to ensure that deep content knowledge is balanced with the development of the skills to apply that knowledge in a variety of areas, some of which are chosen/initiated by the student. For this reason, high schools need to carefully consider the skills, activities, and roles they give students opportunities to experience as they develop the applied learning skills described. As teachers' roles begin to shift from directors/initiators of learning to mentors/coaches of learning, so too will the students' roles shift from receiving content, to interacting with content, and in some cases to transforming/extending content.

This description of applied learning does not mean to imply that it is unimportant for students to engage in other types of activities that might also be called "applied learning" or "applications"[1]. Schools and teachers should continue to address these other important aspects of "applied learning." However, this definition of applied learning requires that students not just do more complex and complicated tasks under the direction of the teacher--no matter how much extension, problem-solving, or reflection this may involve. In order to produce the performances described by these applied learning standards, it is

[1] Aspects of the particular cognitive skills variously defined and organized as "applied" may be found in almost every cognitive taxonomy from Bloom through Marzano and Sternberg to discipline-specific cognitive psychologists such as Schoenfeld in mathematics.

essential to focus "applied learning" in the context of students becoming increasingly more self-directed as learners as they leave our secondary public school systems as young adults.

In the tables that follow, the five major criteria for applied learning are described—critical thinking, problem solving, research, communication, and reflection and evaluation—and appear with a list of more detailed examples of what it could mean to exercise those proficiencies in different contexts or content areas.

Examples of Applied Learning

Critical thinking, in which the student detects incompleteness, inconsistency, and opportunities for expansion of ideas, products, procedures, etc. and formulates core questions and assertions about topics or areas of interest.

Examples

In relation to applying and extending content knowledge, the student can:

- Identify needs that could be met by new products, services, systems, etc.
- Troubleshoot problems
- Analyzes the way a product, system service, etc. works taking into account appropriate considerations such as functional, aesthetic, social, environmental, and commercial requirements
- *Analyze a system, product, service, etc. in terms of completeness and consistency*

In relation to his/her self, the student can:

- Analyze the requirements of a role, responsibility or other type of challenge and use that understanding to shape his or her behavior, activity, and learning

In relation to groups and teams, the student can:

- Analyze the purpose of a group and use that understanding to identify functions the group should have or new purposes
- Consult with and observe other students and adults to understand their roles in a group, team, or system

Examples of Applied Learning (continued)

Problem Solving, in which the student organizes and conducts a process to create intellectual or physical products, hold an event, conduct a process, or otherwise move towards the solution of an identified issue or problem.

Examples

In relation to applying and extending content knowledge, the student can:

- Devise strategies that address identified problems in systems of people, technology, or knowledge
- Design and create a product that meets an existing need or creates a new opportunity or capacity
- Plan and organize the implementation of a strategy designed to solve a problem or address and issue
- Adjust strategies, plans, and implementation as needed to incorporate new understanding or requirements
- Develop tests and strategies for putting procedures, protocols, and systems back in operation or to improve their performance

In relation to his/her self, the student can:

- Use what he or she learns from various sources of information (written, conversational, observation, etc.) to identify ways to improve his of her self-management abilities
- Use what he or she learns from various sources of information to plan, conduct, and monitor projects and other goal-directed activities

In relation to groups and teams, the student can:

- Clarify or develop roles and responsibilities that enhance the effectiveness of a group or team
- Develop and implement schedules that enhance the effectiveness of a group or team

Examples of Applied Learning (continued)

Research, in which the student uses information tools and technology to learn and deepen his or her understanding about a topic or area of interest.

Examples

In relation to applying and extending content knowledge, the student can:

- Establish and use criteria for identifying relevant and credible information
- Identify potential sources of information relevant to a purpose and context
- Analyze information with respect to its origin, internal coherence, usefulness, and limitations
- Interpret the meaning and relevance of information in relation to a particular purpose, project, or activity
- Find and use information to develop an understanding of the way systems of people, technology, or knowledge work
- Appropriately use a variety of sources of information

In relation to his/her self, the student can:

- Consult with and observe others (students, teachers, advisors, etc.)
- Identify goals for the development of behavior, learning, and other activities
- Seek and respond to the advice and criticism of others

In relation to groups and teams, the student can:

- Find information about group or team process (protocols for establishing responsibilities, connecting roles, conducting activities, etc.) that helps a real group or team operate more effectively
- Find information about what the group or team is attempting to accomplish that helps the group or team achieve their goal more effectively

Examples of Applied Learning (continued)

Communication, in which the student questions, informs, and learns from others. In relation to systems, the student can:

Examples

In relation to applying and extending content knowledge, the student can:

- Recognize the need for information that others (peers, partners, clients, the public, etc.) have
- Shape the presentation of information to the needs and interests of a variety of audiences
- Explain the structures and infrastructures of systems
- Justify choices and decisions made in the development, implementation, and adjustment of problem solving strategies
- Appropriately use a variety of media and techniques to communicate about the development, implementation, and adjustment of problem solving strategies
- Persuade an informed audience that a solution to a problem is better than other possible solutions
- Exercise good judgment about the level of detail necessary to communicate an idea or a set of ideas
- Delivers a presentation of work on a problem (approaching the problem, proposing a solution, implementing a solution, or presenting a solved problem) that is coherent in its entirety
- Negotiate with clients about product specifications, timelines, etc.

In relation to his/her self, the student can:

- Identify needs for information she/he has and shape inquiries that produce this information
- Develop written and oral approaches to acquiring needed information as well as information in general that enhances the personal effectiveness of the student

In relation to groups and teams, the student can:

- Identify the informational needs he or she has in relation to operating effectively in a team, group or organization and use a variety of communication strategies to acquire that information
- Consult with, and inform, other members of teams, groups or organizations the student belongs to
- Persuade others (members of teams, groups or organizations the student belongs to) about the legitimacy of a course of action, a position, or an activity the group would conduct

Examples of Applied Learning (continued)

Reflection, in which the student reviews past activity and thinks critically about past activities and plans for the future; and

Evaluation, in which the student thinks critically about a completed activity or project and uses insights based on the review to change planned activities.

Examples

In relation to applying and extending content knowledge, the student can:

- Evaluate the product, service, system, etc. that results from a problem solving activity in terms of the established criteria or goals established for the outcome
- Support her or his evaluation of the effectiveness of a solution to a problem by referring to evidence
- Reflect on opportunities for further progress that build upon completed work
- Identify pitfalls and other dangers in the future conduct of work from experience gained in solving a problem

In relation to his/her self, the student can:

- Critique his or her work in light of expectations established by his or her self
- Reflect on the meaning of completed work and identifies opportunities for further progress based on past accomplishments

In relation to groups and teams, the student can:

- Critique his or her work in light of expectations established by the group, team, or organization
- Evaluate the expectations the group has for itself and its members in relation to the group's purpose
- Reflect on the value of group roles, responsibilities, and procedures