



CEDAR RIVER
ACADEMY

PHILOSOPHY AND MODEL

This writing is focused on communicating the educational problems we are addressing and the philosophy and model we are applying to better serve our students and their families.

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THE EDUCATOR'S CHALLENGE

Educators are faced with the daunting task of preparing children to live and work in a world we can not envision today -- working in careers and occupations that have not been invented, and solving problems that do not now exist. Educators must extend themselves, along with their students' parents, to equip children to be happy, productive, capable, and socially responsible adults. Cedar River Academy was founded to create environments which will promote and facilitate the realization of these objectives.

Traditional school systems have failed. As reported by the Gates Foundation, approximately one third of our children never graduate from high school. Another one third of our children graduate unprepared for college. Only the remaining third of our children are prepared for successful intellectual careers. This condition exists because the basic structure of public school systems was historically designed to mass produce individuals equipped to work in industrial manufacturing environments, and not equip people to solve complex intellectual problems.

A simple solution to the education problems we now face is to replace manufacturing economy-based education systems with natural experience-based systems. People become experts in any field by becoming immersed in it. Doctors do not become doctors until they work extensively with living people with problems. Carpenters do not become carpenters until they work for years in their field. Teachers do not become teachers until they are responsible for classrooms of children year-after-year. Surely, people learn critical facts, processes, and technical information from traditional schools. A child does not learn, for example, to multiply until she learns the multiplication table through memorization, and the process of multi-digit multiplication through repeated teacher demonstration and practice.

At Cedar River Academy we have chosen to replace published traditional curricula by creating experience-based learning environments and programs that immerse the students in complex subjects. Teachers are involved in this process to support their students with fact / skill training and guidance to develop standards-based individualized instructional plans. Done properly, this solution will create and maintain interest and excitement for learning in every student.

OUR PHILOSOPHY AND MODEL

Background

Early American schools were small, generally one-room buildings, poorly furnished and equipped, funded and operated by small communities. With few books and no packaged curriculum, teachers were responsible for the instruction of students of all ages, with the primary aim to teach the students to read and write. The students attended class only when they were not needed to help operate the family business (farm, retail store, manufacturing, freight, and others). Most students attended school for a few years. The

teachers used the few books available for reference or reading. The concept of a text book was absent from this environment. Books that were used for instruction reflected the world of the time and were not artificially created to describe an abstract idea. Moreover, the students spent most of their time involved in the real-world having real, meaningful jobs in the family business. This combination was very effective in achieving the community objectives of enabling young people to rapidly become productive citizens of the community.

The one-room school system spread across the United States and served small, rural communities well into the 20th century. The effective and efficient one-room school disappeared when roads and buses made it seem economically best to consolidate the small schools into larger, central facilities. One-room schools did not meet the community needs as requirements changed from preparing students to enter rural/farming communities to preparing students for lives in manufacturing plants.

The larger centralized or industrialized communities created larger school environments with larger student groups, taught by, generally, men school-masters who used threat and punishment to force the students to perform rote memorization activities. This strict education system did not work well and produced poor results.

In 1837, Horace Mann was assigned by the state of Massachusetts to improve the state's education system¹. Mann was a lawyer, not an educator. He quickly recognized the inadequacies of the existing education systems to meet current and expanding social requirements. He traveled to Europe seeking an educational model that could be adapted. He came to the conclusion that the Prussian system, almost unchanged, would satisfy the requirements of Massachusetts.

This Prussian system, almost exclusively, became the United States class-and-grade system that, with few changes, is still in use. This system was based on a factory model and effectively prepared students for manufacturing jobs. American public school systems have continued to follow this factory model. Psychologists have influenced the development of specific curricula applied in the class-and-grade school systems. Unfortunately, this influence was/is often based on the results of laboratory animal research, or research funded by textbook companies who stand to gain financially from the results².

For the most part, school systems in the United States teach to the median achievement level of each class population. Students are measured on their ability to reflect memorized information, to repeat processes that are not clearly understood, and, in general, meet minimal expectations. This approach is generally not interesting to students and it is shown that only small portions of the information is retained for any length of time.

Cedar River Academy Philosophy -- The founders of Cedar River Academy envisioned finding or creating an education environment for their grandchildren that encouraged and allowed them to learn broadly and deeply while they developed the desire for life-long learning. The founders searched for an existing school system that fit their vision. Being unsuccessful in this search, they launched Cedar River Academy.

In preparing to form this new school, the founders invested in research of the history of education, learning theories, and the science of how the brain learns and works. This work, coupled with the addition of educational experts to the management team, resulted in the definition of the Cedar River Academy educational philosophy. Cedar River Academy management opted to implement an experiential instructional model that allows each student to excel, based on his or her individual requirements and interests.

Our curriculum standards were developed to ensure that they are aligned with the Washington State Essential Academic Learning Requirements. By utilizing an integrated experiential thematic approach, Cedar River Academy has developed a curricula that balances individualized skills instruction with the real-world opportunities to apply those skills and to master the content objectives. Our instructional plans

1 Hart, Leslie A., "Human Brain & Human Learning" (Books for Educators, 2002) pages 26 - 34.

2 Coles, Gerald, "Misreading Reading. The bad Science That Hurts Children"

3. Bereiter/ Englemann preschool program

provide direct instruction, as well as opportunities for guided and independent applications of skills to explore challenging and interesting content.

Cedar River Academy Mission objectives are achieved through the coordination of excellent thematic-based instruction, formal daily procedures including social guidelines and skills, and learning environments that are safe and nurturing. We insist that all the required knowledge and skills are known proficiently and that high levels of content knowledge and the ability to utilize higher order thinking skills in problem solving are also demonstrated.

To ensure on-going excellence, our instructional staff routinely collaborates in formal and informal settings to assess both student performance and the Cedar River Academy Curricula.

The Cedar River Academy approach reflects current research on the learning process to maximize each student's development. Lessons are designed to provide opportunities for children to learn in varied ways as suggested by the research on multiple intelligences by Howard Gardner. Our integrated thematic units and experiential approach allow students to make connections between lessons which support a deeper understanding and an easier and more complete recall based on real life experiences. Our staff is dedicated to seeking out the best possible instructional environments for their students. At Cedar River Academy, we are not a school into which students “fit”; we are a program that evolves and adjusts based on the needs and interests of our students and our expectation is that all students will excel.

Theories of Learning Processes

There is substantial evidence from research in the processes of early childhood development that children absorb massive amounts of information and knowledge as they experience their day-to-day explorations of the world. This natural learning process has been studied and documented by recognized experts. Jean Piaget observed that children's behavior indicated certain predictable patterns of understanding³. He defined a developmental sequence of cognitive growth based on the behaviors that supported learning within that stage: sensory-motor (learning based on sensory input), pre-operational (learning based on personal perceptions, concrete operational (learning based on concrete experiences, and abstract operations (based on reflective, analytical thought). This was significant because it connected learning and experience.

Today, brain research has confirmed many of Piaget's theories. Most importantly, as we learn, the brain literally re-constructs itself. As we take in information, it is stored within the brain. The more meaningful the information, the more connections are established between new and existing information. When it is necessary to recall the information for some purpose, the brain re-assembles the information and it's related components so that it can address that situation. Overtime, the brain develops patterns for recall and problem solving that are strengthened with use. Unused or rarely used response patterns are pruned or weakened. Thus experience initiates the biological process of brain growth and organization.

As educators incorporated the work of Piaget and other theorists and researchers, a new instructional approach evolved called “constructivism”^{4 5}. Educational systems that engaged students, captured their interest, and challenged them to explore subject matter in detail, caused students to internalize important information that could be applied to life experiences years after the information is absorbed. When curriculum materials are developed based on constructivism, great care must be taken to assure the teacher facilitates learning by designing the classroom environment to encourage group activities and individualized problem solving.

Meaningful Instruction and Real-World Applications

Cedar River Academy is committed to providing meaningful student participation in the learning process, utilizing a thematic, integrated instructional model because it allows us to show the connections between information, and the applications of skills, to the real world. Our students develop their own questions and

3 Iran-Nejad, Asghar. “Constructivism as substitute for memorization in learning: Meaning is created by learner” *Education* 116.1 (1995): 16.

4 Lilian G Katz. “The project approach.” *Scholastic Early Childhood Today* 1 Mar. 1998: 43-44.

5 Hart, Leslie A., “Human Brain & Human Learning” (Books for Educators, 2002).

work with their teacher to develop plans for obtaining answers. They take part in small groups and individual tutoring, as well as whole group instruction and independent learning centers.

We also provide opportunities for real-world applications of learning. We believe it is important for students to participate in experiences beyond the classroom. Our students need to see how their learning is related to the real world. For students to receive the maximum benefits from these experiences, it is important that teachers involve students in the planning and preparation prior to the trip. Children help identify information to be sought, observations that need to be made, data to be collected, and the items needed for the trip.

As part of our constructivist approach, we utilize the inquiry method and the project approach to teaching. Both of these methods rely upon a dialectic process of discussion which involves questions and answers that occur between the learner and the instructor. This discussion process is guided by the instructor to reach predetermined goals and objectives. The inquiry process helps learners discover “how to learn” and is aimed at teaching learners how to use and derive rules and theories as opposed to just facts or systems.

A classroom that is based on inquiry and the project approach looks much different than a traditional classroom setting. Students work independently or as part of a group, in order to reach a common goal and objective. Students are learning, reasoning and questioning the subject matter, in addition to absorbing it. Observers will see students experimenting, exploring, hypothesizing and investigating. Students use critical and creative thinking skills to work cooperatively to formulate new and original ideas about the subject matter, as well as learn basic information.

Constructivist teaching methods differ from traditional approaches. Subject matter is taught beginning with the most important ideas, from concrete to abstract, and with the teacher acting as a facilitator. This method provides opportunities to develop high levels of literacy, self-reliance, cooperation, problem solving skills and satisfaction with school. By focusing more on what the students do rather than what the instructors say, constructivist teaching allows students the freedom to discover and explore the world around them.

Examples of student activities include bringing elements of the real-world into the classroom, taking the students out into the real-world to see how things (machines, processes, businesses, governments, the arts) really work, and allowing them to communicate to others what they have learned.

Assessment

Assessment of a student's progress should guide instructional planning. How do you know if you have “put on a few pounds?” Do you weigh yourself regularly? Do your clothes fit differently? Do you feel less energetic and flexible? These are forms of assessing or measuring your weight. Do your assessments cause you to act differently? Do you cut back on portions? Eat more vegetables and fruits? Exercise more? If so, these actions were based on your assessments. In education, we measure or assess learning in both formal and informal ways to determine children's progress towards achieving identified learning goals. In this way, we are able to have a more complete picture of what a child knows and can do. We observe and assess a child's performance and then adjust instruction to challenge that child to develop a deeper understanding of the subject matter and more efficiency in applying skills.

Assessment should benefit a child. At Cedar River Academy, children progress at their own pace and are always gaining new knowledge and skills. Assessment allows us to document the child's current understanding and performance compared to our grade level targets. We then adjust instructional decisions to allow for progress that is continuous and not limited by grade level assignment. Teachers update student progress on the Cedar River Academy online Aspen system at least every other week. This allows parents to track their students progress online and allows teachers to examine class profiles to ensure all students are progressing as expected and to adjust instructional plans as needed. Report Cards are issued online three times a year and hard copies are sent home an additional three times per year.

Documentation makes learning visible. When teachers observe children and document their progress, it helps the teacher to actively see and listen to the children. It also helps teachers be aware of their own ways of interacting with children and facilitates discussion of curriculum and instruction among teachers in the Professional Learning Community.

Observations can be recorded in many ways. At Cedar River Academy, we use a variety of tools for recording observations. The following list includes the types of data that may be collected:

- Anecdotal records
- Portfolios of student work
- Dictated or transcribed conversations
- Audio tapes
- Photos, videos
- Children's work
- Checklists
- Class profiles
- Standardized assessments, when applicable

As we review the children's work and changes over time, we are able to record a physical record of each child's growth and increased understanding. Teachers can use this information to select or develop learning activities that support the children as they continue to expand their knowledge and skills. Cedar River Academy is committed to the use of this authentic assessment process and uses Collaboration Days and training days to work towards continuously improving them.

Continual School Improvement

Educational programs should be repeatable, ever-improving, and deliver an excellent education to every student. An automated system is being implemented to assist the Cedar River Academy instructional staff in meeting these requirements. This system allows us to establish curriculum standards and assessments, define the scope and sequence for each grade level and subject, create and execute effective instructional procedures that can be shared, clearly define what the student is to learn from instructional procedures and what the student must do to demonstrate the learning process was successful, define student improvement and professional development plans to respond to measured performance, and adjust instructional plans and procedures based on student performance.