



ENVIRONMENTS THAT INSPIRE LEARNING

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Often expressed is the opinion that "a good teacher can teach anywhere" - in a classroom, a laboratory, or even under a tree. We maintain that a good teacher has the potential to become a great teacher, in a supportive and inspiring learning environment. The environment itself has the potential to teach, introducing students to new concepts, reinforcing local traditions and heritage, supporting educational philosophy and pedagogy. The environment has numerous opportunities to support learning:

- Planning Concepts
- Explicit Educational Manifestations
- Implicit Educational Manifestations
- Environmental Educational Manifestations

PLANNING CONCEPTS

With a thorough understanding of educational philosophy and pedagogy, design professionals can support the school's mission, goals and objectives. The organization of learning environments has significant effect on teacher/staff member interactions, students' community perceptions, and students' interpersonal relationships at school; whether the combined effects are positive or negative has everything to do with the planning process. A school organized around small, integrated curriculum clusters (faculty members teaching various subjects and working as a team with small student groups), demands a design supportive of this organizational principle. When teachers collaborate in this manner, space must be provided for them to do so effectively. If support services (administration, counseling, special services) are de-centralized, then space must be provided to locate them within the cluster. Natural environment may take a dominant role in daily learning activities; then each learning environment must have easy, direct access to the outdoors. If career and academic options are emphasized, then the learning environment must facilitate internships and apprenticeships, support hands-on demonstrations and presentations,

and offer opportunities for students to explore various career choices, while attending school. Alternative learning methods, such as project-based learning, working in groups, or personal student stations, require an educational environment organized in support of these activities, permitting students new learning adventures.

EXPLICIT EDUCATIONAL MANIFESTATIONS

Often, best results come from directly engaging students in the learning experience. Explicit educational manifestations can introduce students to basic, timeless educational principals as they move around their campus. These explicit examples may take the form of graphics or 3-dimensional elements. The environment can be text-rich, in the style of early 20th Century buildings, with the introduction of inspirational quotes and mottos marking the entry portals. Today, utilizing large-format photographic enlargements and reproductions, we can employ processes typically exhibited in advertising and in sporting venues, to introduce students to educational principles, historical events, chronology, and scientific/mathematical relationships. Examples of these graphically-illustrated principles could include measurement, geometric shapes, numbers, letters, words and phrases, or a 2-dimensional or 3-dimensional representation of the solar system or sundial.

The building can exemplify and celebrate local traditions and history, recalling important individuals (perhaps past students or teachers), and unique neighborhood or regional features. Examples might celebrate the region's historic connection to mining, agriculture, railroads, school benefactors or namesakes, and others who made important community contributions. The environment can reinforce the celebrations of history and tradition, while demonstrating historical ties to mining, railroads, agriculture and other regional features, in honest, contemporary interpretations. If the school has a curricular or professional focus then the environment can support that focus. A health academy can have similar attributes to a medical facility. An aviation high school may have learning environments connected to an aircraft hangar.

The passage of time affords the opportunity to celebrate unique and influential graduates, thereby offering students a vision of their potential achievements. Excellent learning opportunities present through hands-on experiences. Students have the opportunity to engage with the building through the use of various educational artifacts such as pendulums, fulcrums, prisms, various kinds of glass, and tactile and educational experiences available in various building and finish materials.

IMPLICIT MANIFESTATIONS

Effective learning also takes place when ideas and principles are implied rather than expressly stated; students have to dig a little deeper to understand the meaning, intrigued by building features that demand future exploration. These concepts may be evidenced by exposing building structure or systems, where physical principles are "in action", as they support the building. Principles such as polarity, voltage, and current can be safely demonstrated using the electrical systems. Heat stratification, air pressure, volume, and dispersion can be exemplified in the mechanical systems.

At more subtle and sophisticated levels, students can be introduced to the "golden mean", the polar star, and the winter and summer equinox, utilizing special building features only evident upon further exploration, or during specific seasons. Floor patterns can mimic the DNA molecule, lights can be arrayed like constellations, evident only when students ask questions and probe beyond the explicit. An excellent example: a school display featuring hundreds of glass blocks, with artifacts encased in each, the meaning of which is accessible only when students perform the necessary, underlying research.

ENVIRONMENTAL MANIFESTATIONS

The environment is a rich teaching tool. On the “macro” level, every school is located in a specific climate zone, and deserts, forests and tundra are not the only interesting areas to explore! Every urban setting has a historical context, potentially evident in the learning environment, as the building recalls the region’s native character and historical traditions. Landscapes can reinforce curriculum, as plants are labeled, cataloged and studied; native plantings and re-creations of small micro-climates promise additional learning adventures. Rich, abundant learning opportunities abound when students can plant and grow gardens, study water flow and drainage, and sculpt the surrounding landscape.

The built learning environment can be energy-efficient, constructed with renewable resources demonstrative of recycling principles; a continual and surrounding encouragement to students, as they become tomorrow’s environmental stewards.

SCHOOLS OF THE FUTURE

What is our vision for the schools of the future? Will they be schools in the traditional sense, or internet nodes on the worldwide web; perhaps “genius centers” located throughout the community; or linked apprenticeships/internships and shadowing, interlaced with businesses and institutions?

Effective, contemporary learning environments develop an educational context that is small, personalized and integrated; teachers and students work together, and curriculum is introduced through project-based learning that is engaging and effective. Students work in office-like settings with personalized spaces and have opportunities to collaborate with peers in small groups. The learning environment continues to offer opportunities for lecture and laboratory settings, as needed. The environment is enriched with support space, providing essential resources for students in project- and experiment-based learning. Opportunities are built-in for students to share what they have learned, through exhibition and performance. Fitness is not just for athletes, but is an integral part of every program, exemplifying the important role that fitness and mental health play in future student success. Eating/dining activities offer students the chance to control meal timing and food choices. The outdoor environment also makes an essential educational contribution, with opportunities for students to become better stewards of our natural resources.

Where can we garner inspiration for our schools of the future? The office environment may provide essential clues; “hotel-ing space” can be shared by a number of students (as with today’s telecommuters), since many students may be off-campus, exploring other career and educational choices. Science camps may provide future inspiration, offering students a chance to live completely off-the-grid, actively participating in environmental lessons by metering and conserving water, energy and other resources. Retail environments (Apple Store, Barnes and Noble, food courts) may guide the development of personalized educational plans, student choice, and vocational/avocational opportunities that help students follow their dreams, wherever they lead. Perhaps our future teachers, learners and learning environments will be arrayed throughout communities, permitting students to learn any time and any place, while offering essential educational resources in an ever-more-competitive and global society. Winston Churchill said, “A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.” The challenges facing us today present a rare opportunity to “... *transform our schools...to meet the demands of a new age*”. Our responsibility is simply to seize that extraordinary opportunity, promoting, designing and building environments that support and inspire learning for all students.