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Innovation in Education: Designing for the Student

Despite drastic changes in curriculum and educational delivery, many classrooms still resemble classrooms of the early 1900s -- rows of desks facing an instructor and blackboard. A movement to better address students' needs is now at the forefront of educational facility design, paving the way for student-centered learning environments. School facilities must accommodate new curriculum opportunities.

Evolution of Learning

Consider how the dissemination of information has changed over the past 50 years. Transmitting information was once reserved for print or broadcast forms of media, but the emergence of the Internet and the subsequent technology boom introduced an entirely new way of receiving and sending information. Students are able to readily access a limitless amount of information, and many schools struggle to address this information explosion. How much access is too much access? What restrictions should be placed on technology in the classroom? Despite these challenges, the fact that students must be prepared to enter a technology-driven global economy remains, and schools must reflect these environments to stay relevant.

Facing the Facts

According to Smithsonian Student Travel, 46 percent of teachers polled said their homework assignments require technology. Furthermore, 94 percent of students surveyed said they use technology to do homework. The explosion of technology created a generation of digital natives, and the majority of students are now technology-proficient.

Modern Skills

Some may argue that technology's ever-increasing presence has led to a decline in human interaction, but modern skills that promote social interaction, including collaboration, problem solving and critical thinking, are more important than ever before. Students must be both technology-literate and effective communicators, and schools are faced with the challenging task of preparing students for a globally-competitive economy and workforce.

Student-Centered Learning Environments

Have you heard of student-centered learning environments? Or modern learning environments? Maybe even 21st century learning environments? Each of these terms conveys the same basic principle: a learning environment that focuses on the needs of the students, rather than those of others involved in the education process (i.e. teachers, administrators, etc.). Students choose how they will learn, where they will learn and with whom they will learn, requiring students to be active, responsible participants in the learning process.

Traits of Today's Learners

Today's learners are active learners; they learn most efficiently by doing. Problem solving skills are most effectively developed within the context of a problem. The technology rise has contributed to this shift in learning; students are now conditioned to actively utilize technology to readily access information vs. passively standing by.

Collaborative learning models are what students can expect in the working world. By incorporating group work into school curriculum, students learn how to work as a team. Each student's individual strengths contribute to the success of the group. The independent learning aspect of group work gives students a feeling of control and self efficacy. The potential to create an interdisciplinary approach through project-based learning and therefore increase the relevance of the lesson for students also exists.

How Can Schools Transform Themselves

Leadership is critical to ensure a clear vision for curriculum and educational delivery is implemented. Learning environments and facilities need to be flexible to meet the needs of the student. Attention must be paid to developmental needs, and technology must be infused into schools, similar to how it is infused into the workplace. Teamwork and collaboration between students are essential in preparing them for the team-oriented tasks they will face in the workplace. Information must not be shared only with classmates, but with the larger community as well. Successful pairings with local businesses can dramatically increase educational opportunities and expand horizons for students.

Ideal vs. Real

In an ideal world, learning environments would extend beyond the traditional classroom to encompass research and reference space, group project space, individual project space,

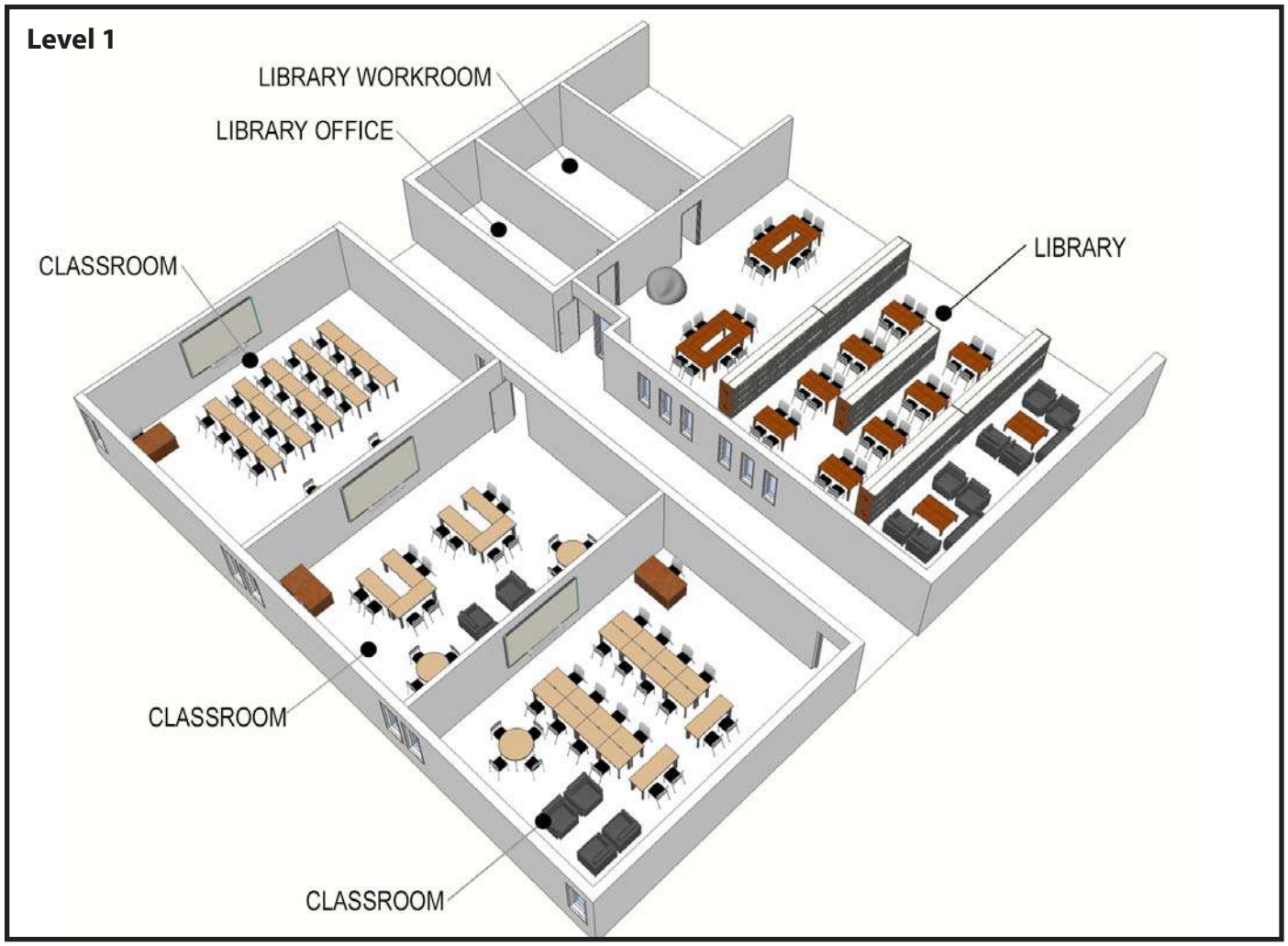
demonstration space, quiet space and outdoor learning space. How can the learning environment balance between the ideal and reality? Relative to classrooms, the ideal size would be larger than today's classrooms (1,000-1,500 sq. ft. compared to 800-900 sq. ft.) to accommodate flexible furniture and numerous configurations. Classrooms would be designed with large group, small group and individual study spaces. Wireless laptops would permit portability and flexibility. Project-based learning would be supported by the adaptability of the furniture in the room, and classrooms would have access to rich outdoor spaces.

Making the Change

We understand that building a new, state-of-the-art school is not the most feasible, economically-friendly option. However, it is possible to transform your existing space into one that better accommodates today's learner. Below we explore different options for altering your space, with each level increasing in depth and variety.

Level 1: Flexible Furniture

Illustrated in the graphic below, adding light, easy-to-move furniture to your classroom and library spaces permits greater flexibility. Different types of furniture, varying in size and materials, are easily reconfigured based on the desired learning environment, including both a traditional lecture style classroom or one that encourages project-based, group work.



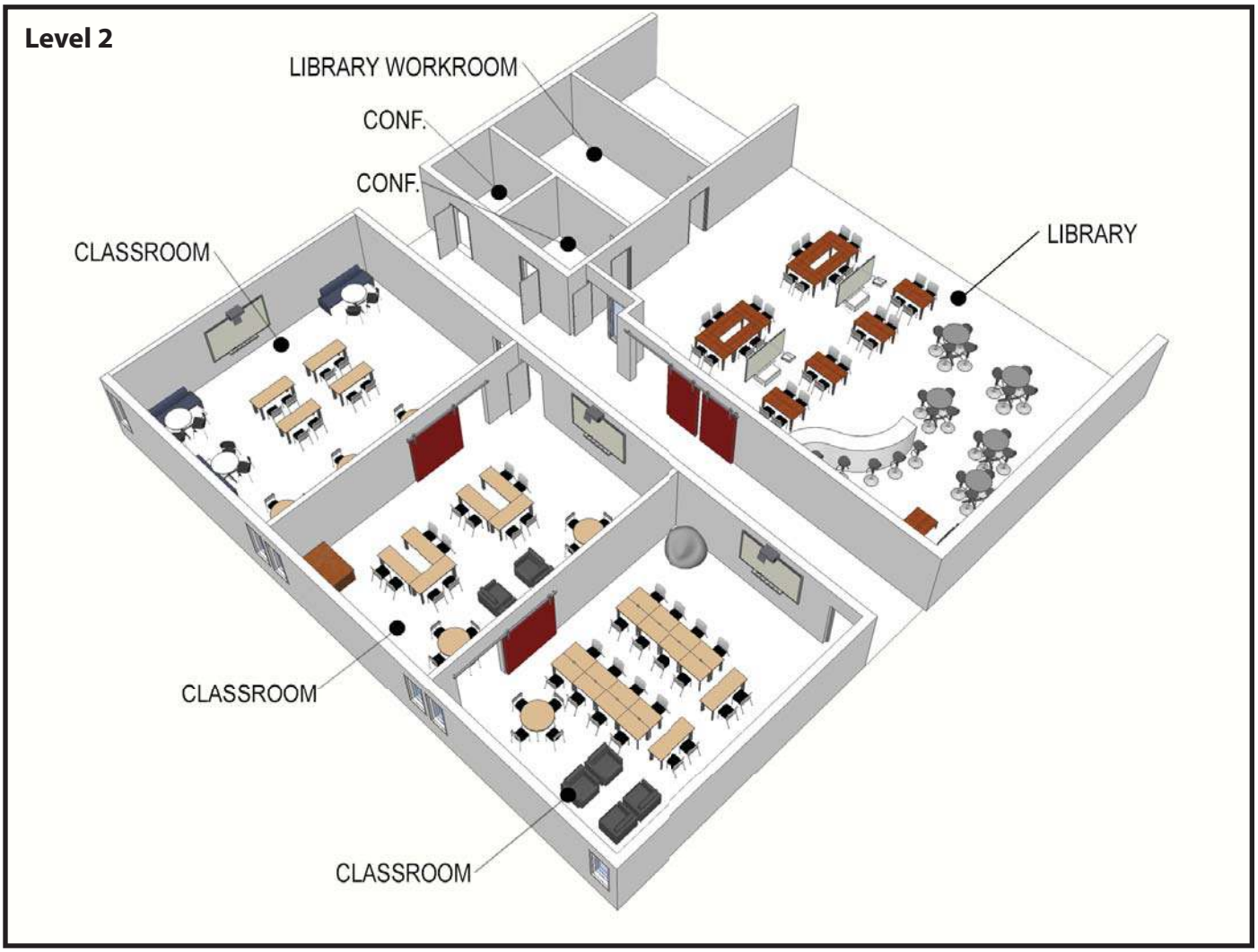
Level 2: Building Element Additions

Beyond flexible furniture, simple modifications to your building's existing structure offer connections between rooms, providing team teaching and large, group instructional spaces. Sliding "barn door" panels and movable wall partitions, as shown in the graphic below, encourage collaboration between classrooms. In the library, rows of book stacks are reduced, and a cafe style "bar" is installed, further encouraging more collaborative methods of learning.

Movable walls may also be used in the context of stage areas adjacent to cafeterias and gyms. When the walls are closed, the stage can function as a classroom, increasing the building's multipurpose space. The ability to blur the line in learning settings increases a level of comfort and spontaneity among students.

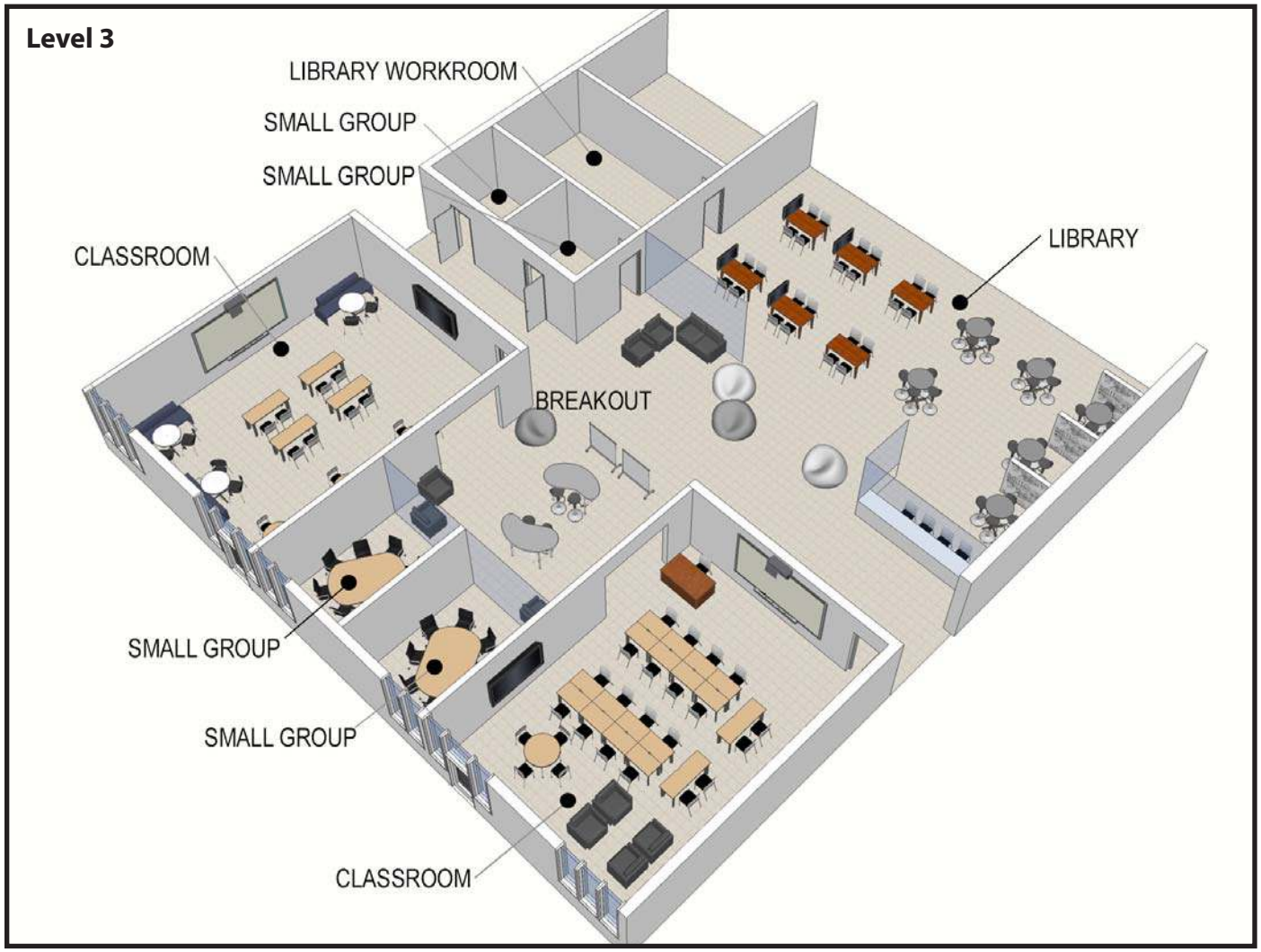
Level 3: Space Reconfiguration

Space reconfiguration involves larger, more comprehensive changes to a building's layout. Classroom walls are removed, and space is re-purposed for breakout areas and small group learning spaces. Breakout areas break down physical barriers that exist within a school building and create a variety of learnings spaces and environments. They function as shared resource spaces and support team teaching and project-based learning. Although these areas may foster a sense of



student independence, supervision and teacher support are still important. As shown in the graphic below, the library becomes a multi-purpose commons and a centralized "hub" for both students and staff.

Regardless of which level is employed, incorporating technology is imperative. Interactive boards, walls and tablets can complement or replace the traditional chalk or marker boards, and tablets promote mobility and enhance instructional capabilities. Combining a technology-rich environment with one that promotes student-centered learning will aid in properly preparing students for the workplace. For more information on designing for the student, please contact a member of our K12 education studio team.



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