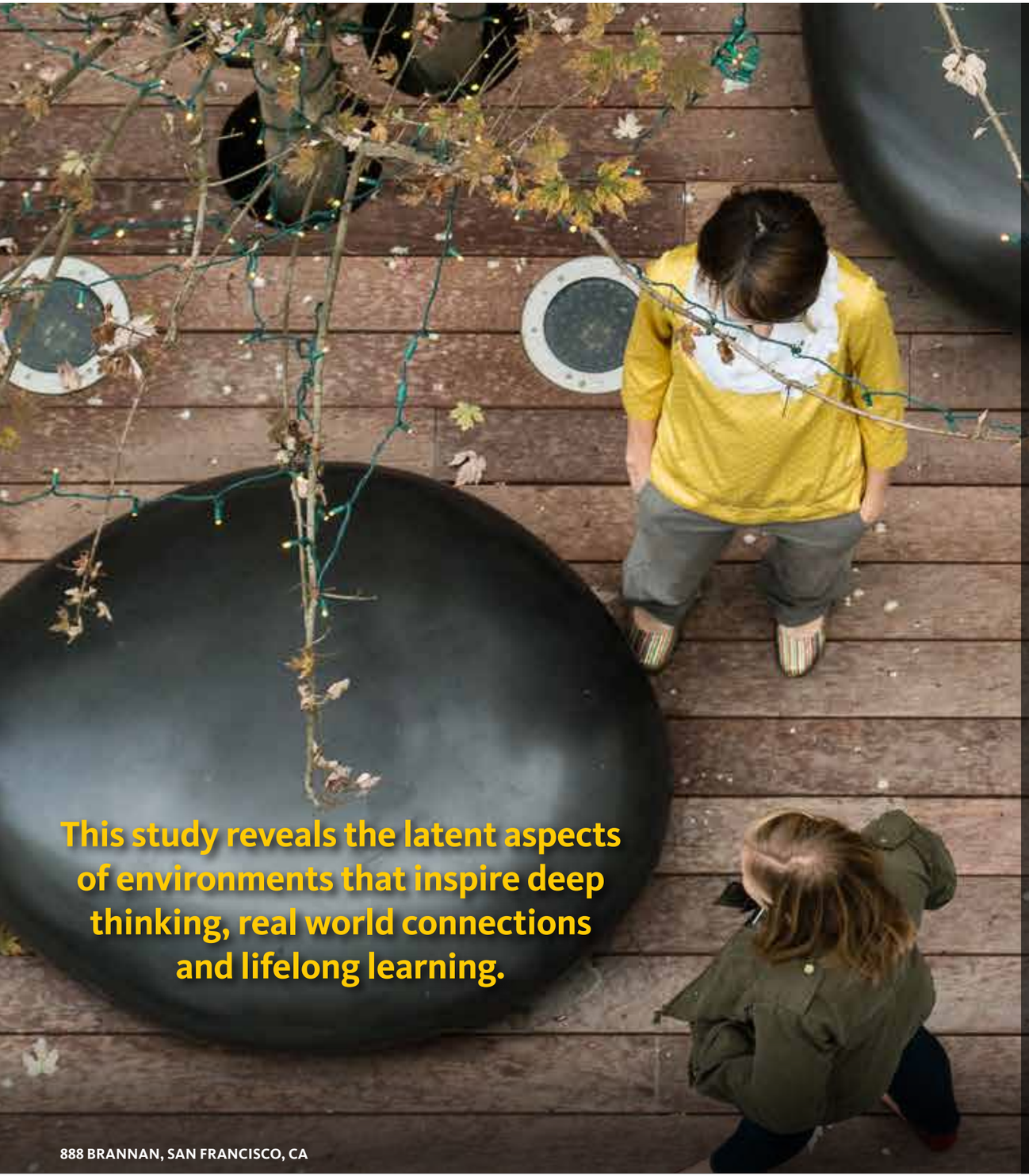
Gensler

re imagining learning

strategies for engagement

"Do not train a child to learn by force or harshness; but direct them to it by what amuses their minds, so that you may be better able to discover with accuracy the peculiar bent of the genius of each."

Plato



This study reveals the latent aspects of environments that inspire deep thinking, real world connections and lifelong learning.

888 BRANNAN, SAN FRANCISCO, CA

reimagining learning

strategies for engagement

Introduction

If you are an educator, a learner, a parent, a professional, or just part of the conversation about where education is headed, this catalogue is for you.

As designers for learning spaces, we see great examples of learning environments and those that could be better. The most successful spaces balance technology and low-tech solutions, and offer settings for both team-based learning and areas for individual focus. There are innovative learning spaces everywhere, and we've put this piece together to articulate what makes them great.

The collection of imagery in the pages that follow strives to leap beyond the tools and tactical aspects of effective classrooms. We hope to re imagine learning and to bring to light the latent aspects of successful learning environments that incite people to learn deeply, to recognize the real-world connections to what they learn, and ultimately to become lifelong learners, engaging in learning that is connected.

About This Book

The document is comprised of three sections:

- **the different ways we learn**
- **qualities** of effective learning spaces
- design **strategies** for engagement

We hope that this collection of imagery inspires you to look beyond the classroom to see learning or the potential for learning in all places you encounter.

why **re** imagine learning?

A National Dialogue

An internet search of the term "U.S. students compared to other countries" yields hundreds of articles ranging in tone from "crisis" to a "non-issue." The plethora of results, though, points to the fact that the quality of our public education system is under the microscope, and for good reason: many of our students are not making the grade in comparison to other countries. The discussion around U.S. education is everywhere: from news outlets and educational journals to TED talks and international conferences. Today, even the tech industry getting in the game, with organizations like the Gates Foundation, Apple, and Google all sponsoring initiatives to innovate and improve the quality of education in this country.

Deeper Learning

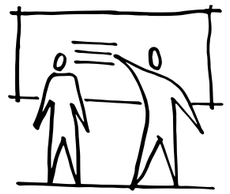
New research on the brain and how learning happens has resulted in a series of publications that are starting to change the vocabulary when it comes to teaching and learning. In "How we Learn," Benedict Carey, notes that the brain has not yet adapted from its foraging instincts to "fit" the current model of education. In "How Learning Works" the authors describe learning as "a process that leads to change, which occurs as a result of experience and increases the potential for improved performance and future learning." Learning is a process not a product, a process that involves change in knowledge, beliefs, behaviors, or attitudes. It is something students do for themselves. In the New Media Consortium's Horizon Report: 2014 K-12 Edition, the NMC examines emerging technologies in schools with key trends revolving around the role of teachers, deeper learning approaches, focus on open educational resources, hybrid learning designs, the acceleration of intuitive technology, authentic learning opportunities, personalized learning, and developing technology for schools.

Shifting the Paradigm

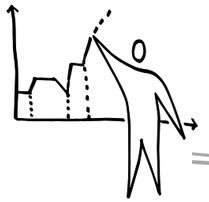
Recent research by the Harvard Graduate School of Education, suggests our current system places far too much emphasis on a single pathway to success: (completing high school to graduating from a four-year college after), yet only 30 percent of young adults successfully complete this journey. According to the report, it is long past time that we broaden the range of high quality pathways offered, beginning in high school as lessons from other countries strongly suggest. New approaches to pedagogy and increasing levels of collaboration between schools and industry, spurred by the above factors, mean that the design of the classroom as we have come to know it, needs some serious rethinking. The postwar model of neat front facing rows of desks, with the all-knowing teacher is outmoded. New designs must accommodate a variety of teaching modes and learning, and adapt to ever-changing advances in technology. Maker-type spaces that encourage hands-on learning are increasingly in demand. Most importantly, these spaces must engage learner and teacher alike, spurring the dynamic interactions that foster the deepest learning.

EAST STROUDSBURG UNIVERSITY, EAST STROUDSBURG, PA

CONVEY
sharing what you're learning

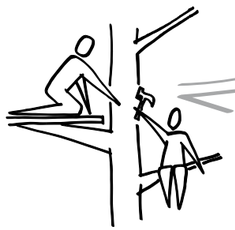


ACQUIRE
actively seeking knowledge



MASTER
proving you've got it

COLLABORATE
fostering networks



EXPERIENCE
testing knowledge by experimenting

REFLECT
internalizing knowledge

THE DIFFERENT **WAYS** WE LEARN

By learning in diverse and interconnected ways we build deep and durable knowledge

COLUMBIA COLLEGE CHICAGO, CHICAGO, IL

acquire

actively seeking knowledge

actively connecting with an idea
gives it relevance

collaborate

fostering networks

exchanging ideas with peers provides more than transferring information; collaboration forges networks of knowledge

CONFIDENTIAL TECHNOLOGY CLIENT

reflect

internalizing knowledge

reevaluating and refining ideas, and absorbing and shaping new concepts embeds knowledge deeply

VENABLES, BELL & PARTNERS, SAN FRANCISCO, CA

experience

testing knowledge by experimenting

applying new ideas bridges the gap between learning and doing to build strong knowledge ownership

BELLAIRE HIGH SCHOOL, HOUSTON INDEPENDENT SCHOOL DISTRICTS, BELLAIRE, TX

NYU STEINHARDT DEPT. OF MUSIC, NY, NY

master

proving you've got it

assessing retention enhances learning by driving performance

HACKNEY HOUSE, SXSW, AUSTIN, TX

convey

sharing what you're learning

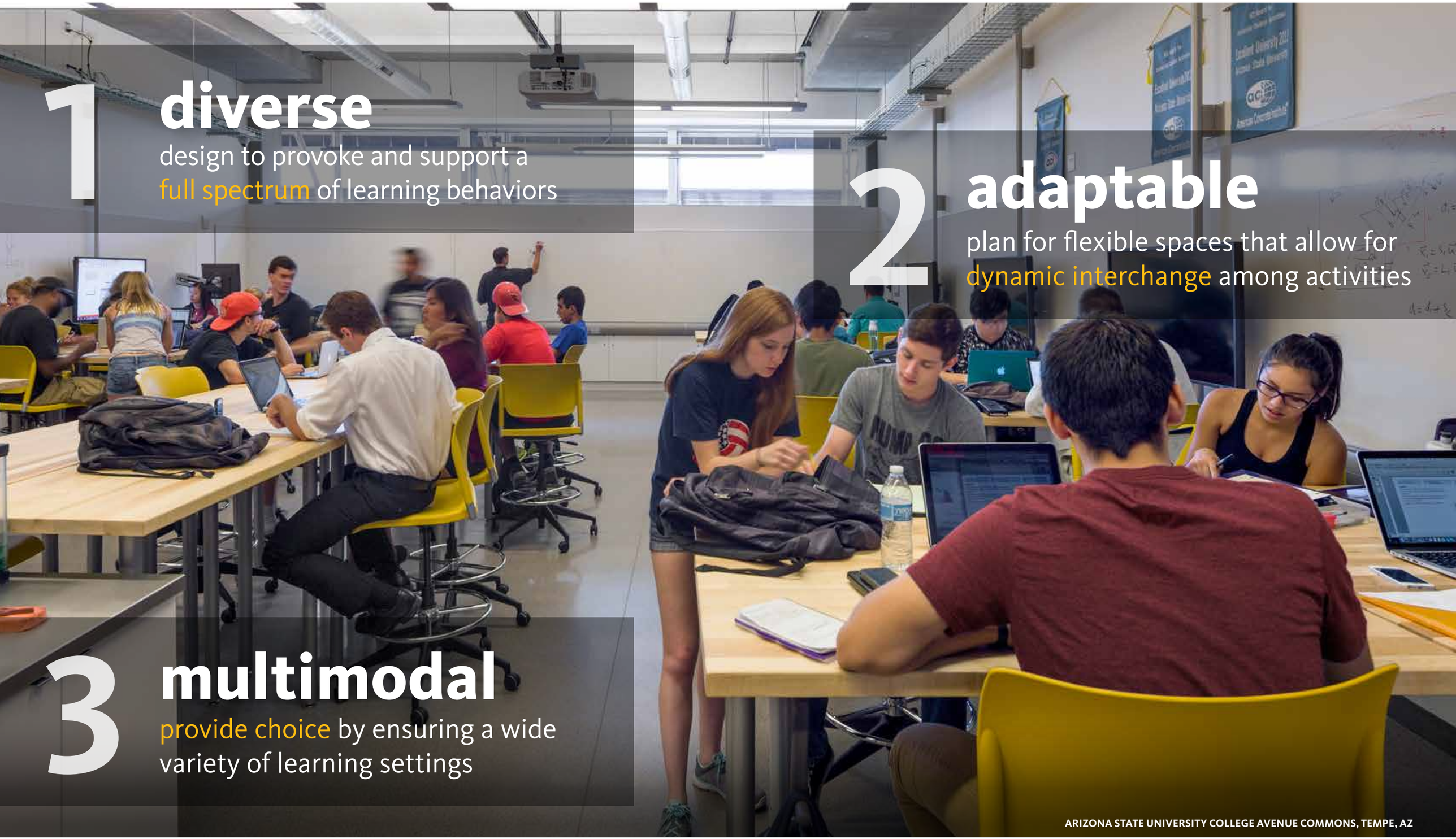
exposing new knowledge, when learners become teachers, solidifies the process

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

QUALITIES
OF EFFECTIVE
LEARNING SPACES

(**3**) critical qualities allied with a key differentiator (**+1**) - the vital value of engagement - that define effective, connected learning spaces



1 diverse

design to provoke and support a full spectrum of learning behaviors

2 adaptable

plan for flexible spaces that allow for dynamic interchange among activities

3 multimodal

provide choice by ensuring a wide variety of learning settings

ARIZONA STATE UNIVERSITY COLLEGE AVENUE COMMONS, TEMPE, AZ

+1 engaging

engagement fuels learners from the inside out, spurring a proactive approach to their own learning process, and fostering ownership, accomplishment, and empowerment

GAMEDESK PLAYMAKER SCHOOL,SANTA MONICA, CA

COLUMBIA COLLEGE CHICAGO, CHICAGO, IL

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

= CONNECTED

a seamless network, spanning the gaps between teachers and learners, among disciplines, and ultimately, bridging the continuum of learning from academia to cities and society

encourage an **integrated culture** of collaborative learning

design rooms to **flex and grow** depending on activity

ensure exposure to the **community** and the outside world

integrate physical and **virtual learning** environments

encourage **learning to continue** beyond the class period

increase **collaborative** opportunities

enhance **acquiring** and ultimately **conveying** of ideas

activate transition spaces into exciting areas

encourage learners to **convey** their work

integrate presentation with practice

increase **awareness of learning**

celebrate student work and enhance a **sense of ownership**

provide a **sense of belonging** and being a part of something

promote **a culture of sharing** of thought process

support **spatial and pedagogical diversity**

design for **impromptu interactions**

allow students to **adapt the space** to evolving needs

connect **formal and informal** learning

promote **health and wellness**

blur the boundary between **work and fun**

instigate **new ways to activate** and own the learning space

provide a **sense of security**

offer a collaborative **touch-down** point

allow for an **immersive learning** experience

enable **individual focus** within active, public settings

invite groups to gather for brief **focused interactions**

provide a destination for **information exchange**

enable **diverse uses** of spaces

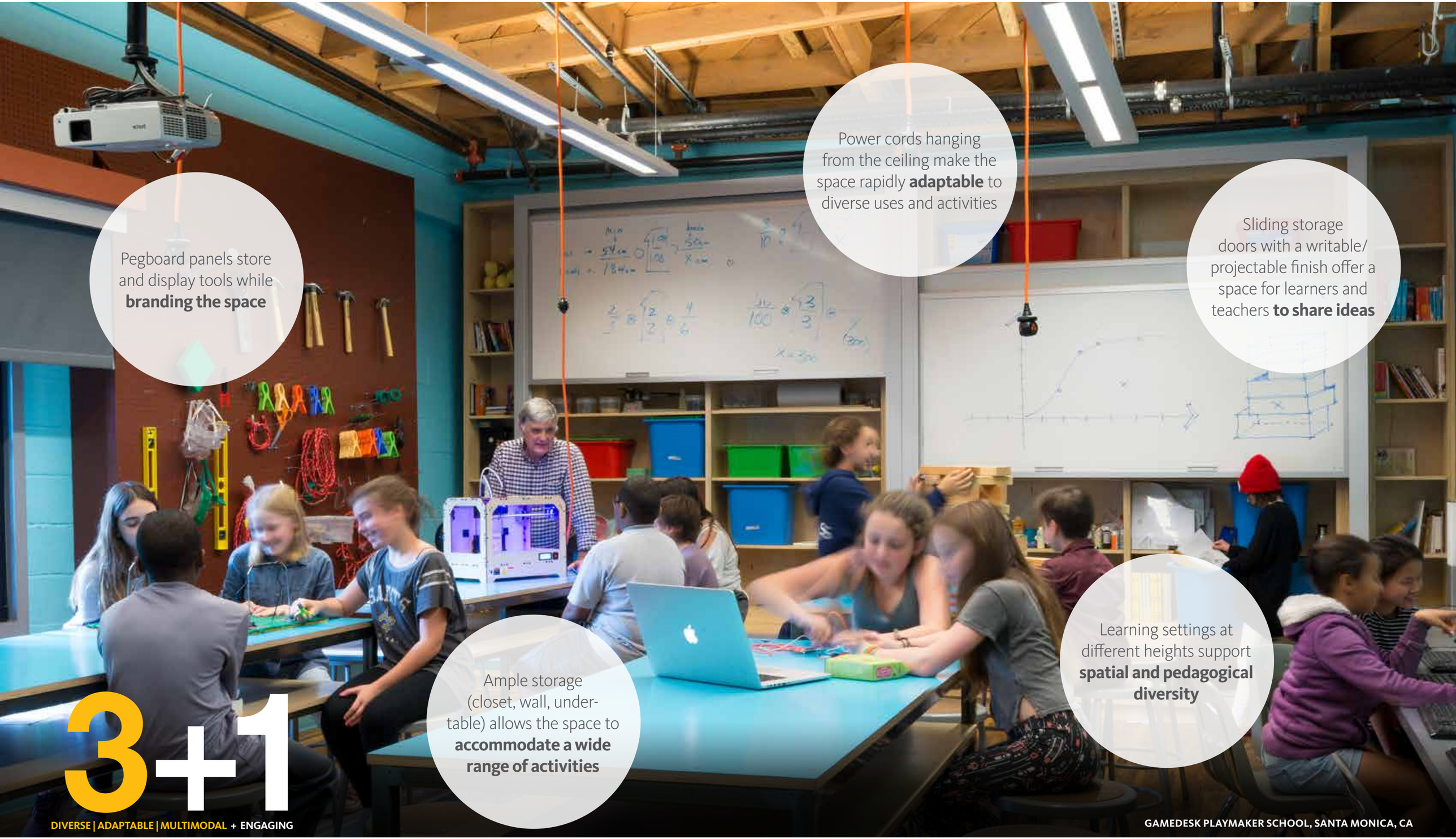
help students to **take pride in their successes**

provide **choice** and cultivate autonomy

DESIGN **STRATEGIES** FOR ENGAGEMENT

Design can catalyze connected learning by embodying the (3) qualities of effective spaces and engaging learners (+1) by supporting the diverse ways we learn.


Connecting to the outdoors **blurs the boundary between work and fun**
Pinup space allows learners to **convey** their work and learn from the work of others
Short throw projectors **transform space** from an experiencing to an acquiring moment
Ample work surfaces support **experimentation, reflection, and collaboration**
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
CAMPBELL HALL EPISCOPAL SCHOOL, NORTH HOLLYWOOD, CA



3+1

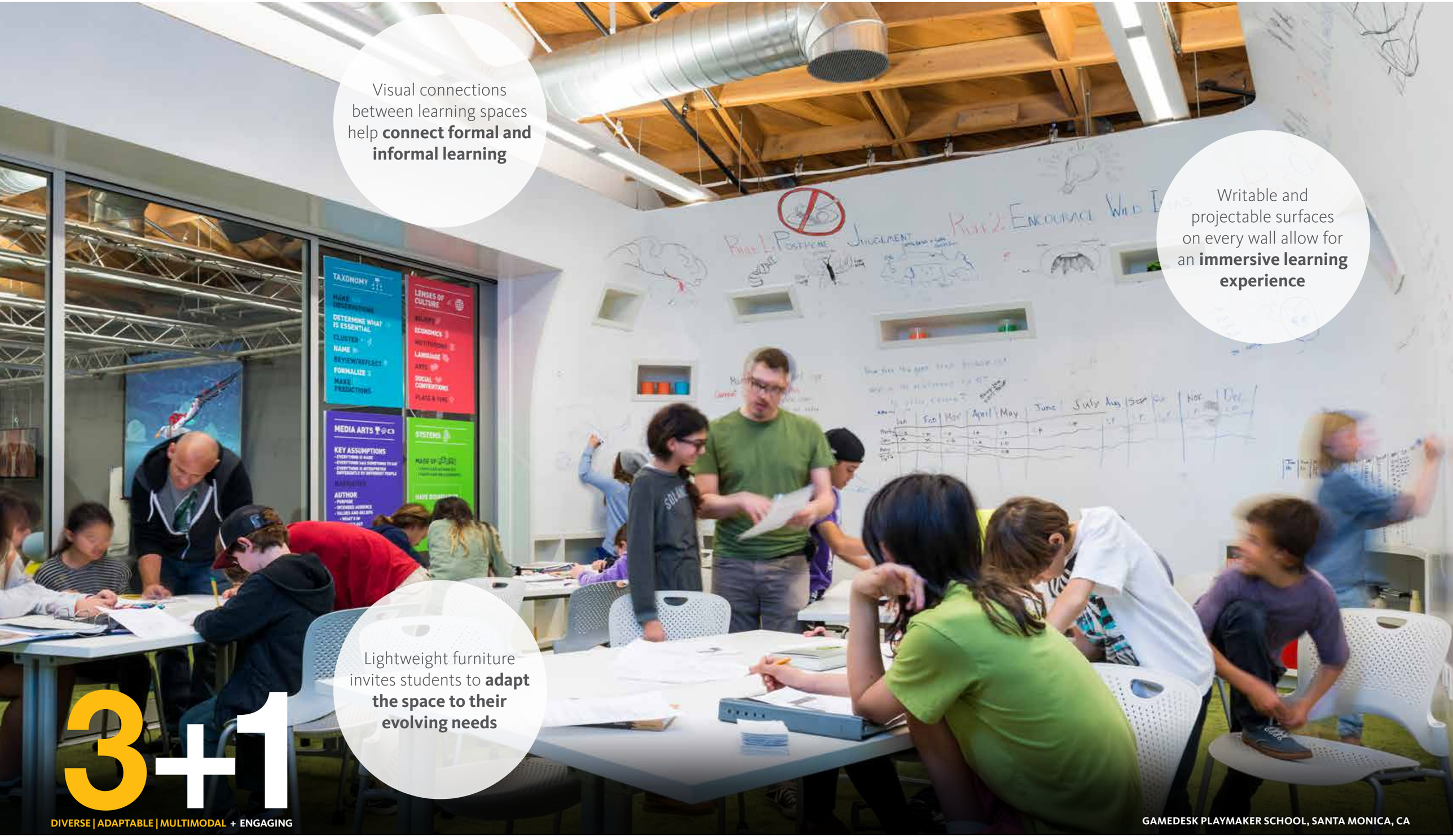
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

GAMEDESK PLAYMAKER SCHOOL, SANTA MONICA, CA

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

JAMES BERRY ELEMENTARY SCHOOL, HOUSTON , TX



Visual connections between learning spaces help **connect formal and informal learning**

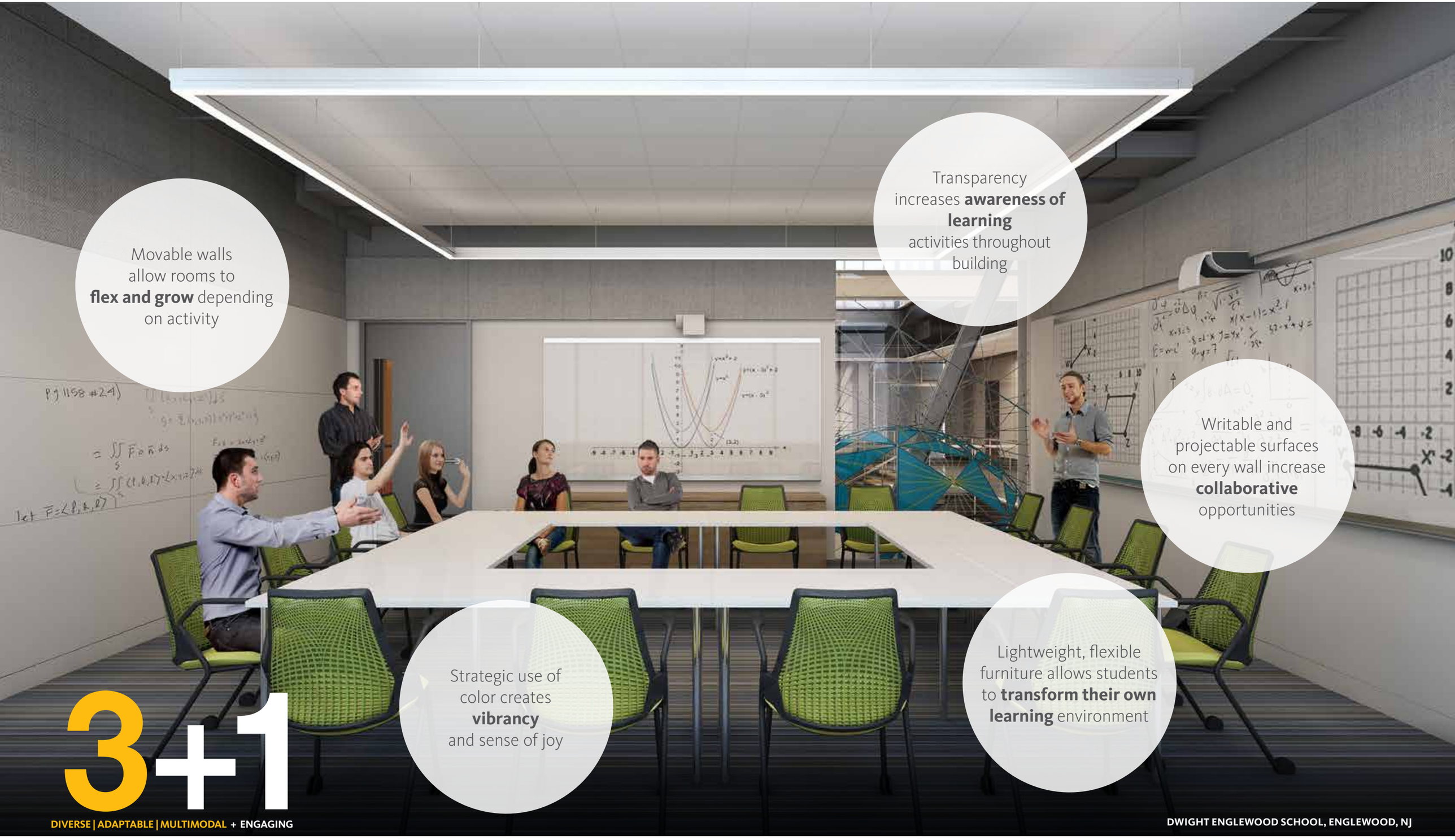
Writable and projectable surfaces on every wall allow for an **immersive learning experience**

Lightweight furniture invites students to **adapt the space to their evolving needs**

3+1

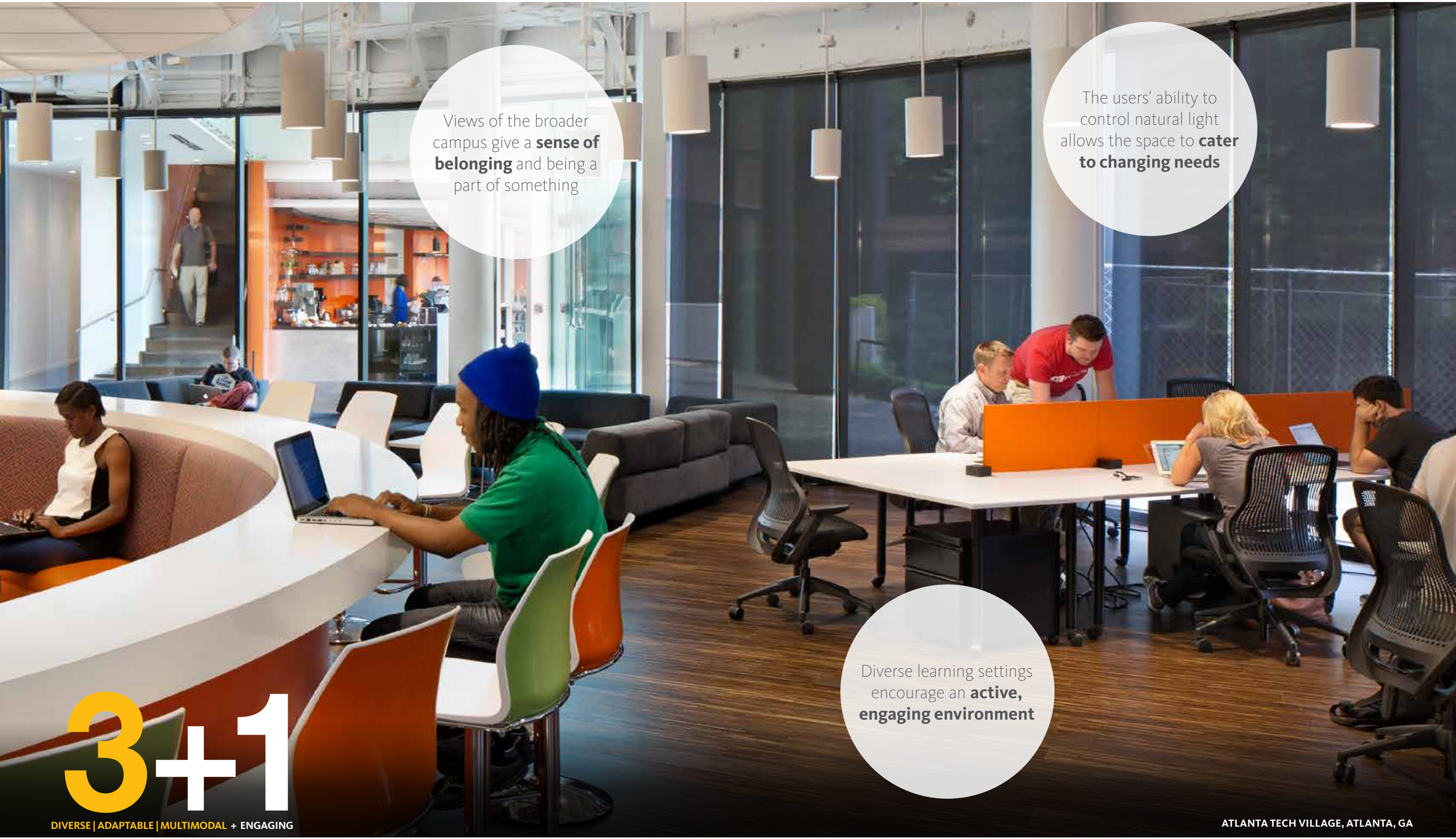
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

GAMEDESK PLAYMAKER SCHOOL, SANTA MONICA, CA



DWIGHT ENGLEWOOD SCHOOL, ENGLEWOOD, NJ


Large displays or projection screens enhance **acquiring** and ultimately **conveying** of ideas
Pinup spaces along entire walls celebrate student work and enhance a **sense of ownership**
Movable amphitheater-like seating creates **spaces within a space**, supporting collaborating and conveying
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
NEW LINE LEARNING ACADEMY, KENT, UK


Views of the broader campus give a **sense of belonging** and being a part of something
The users' ability to control natural light allows the space to **cater to changing needs**
Diverse learning settings encourage an **active, engaging environment**
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
ATLANTA TECH VILLAGE, ATLANTA, GA

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

DWIGHT ENGLEWOOD SCHOOL, ENGLEWOOD, NJ

3+1

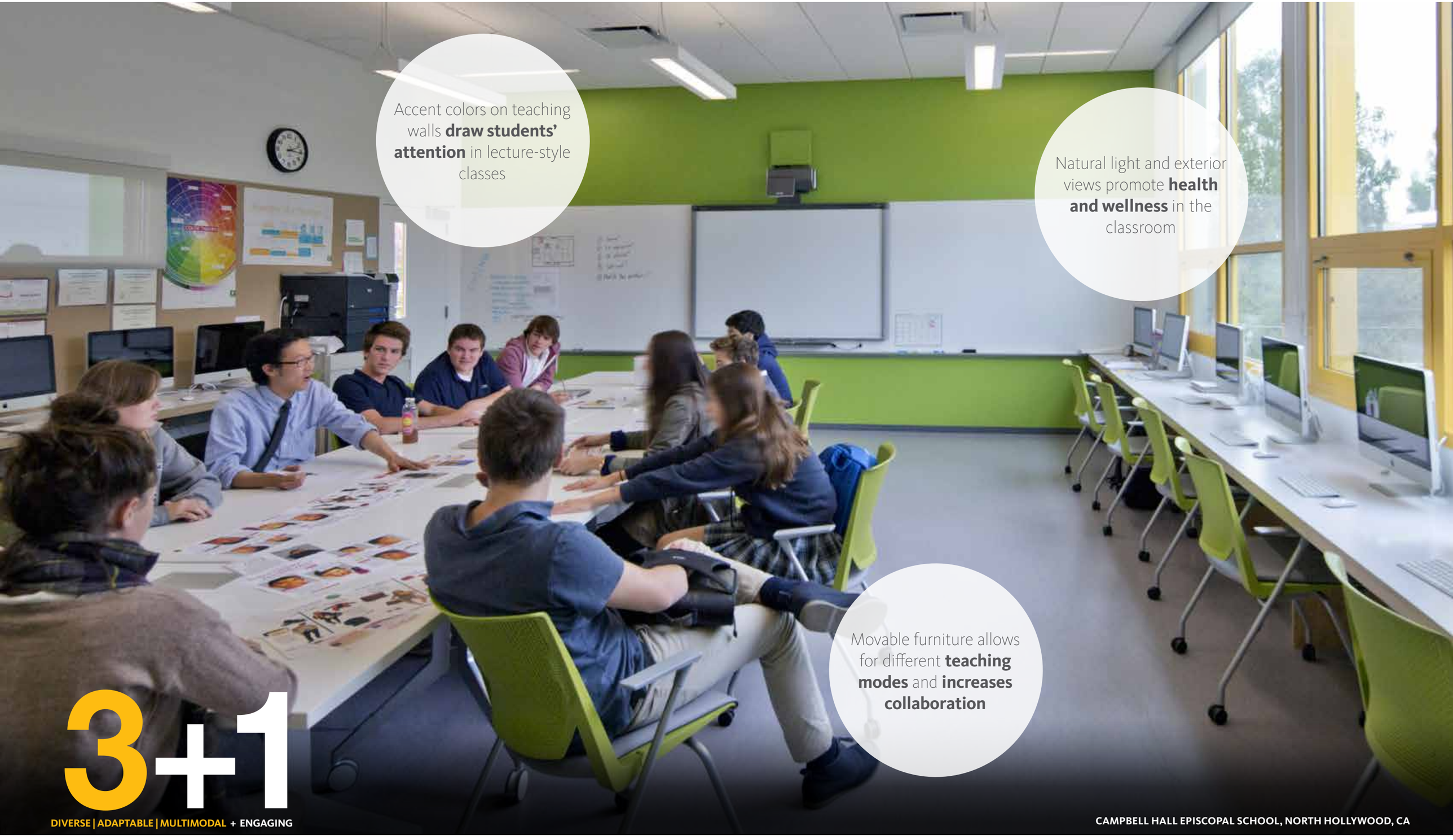
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

WISEBURN SCHOOL DISTRICT, HAWTHORNE, CA

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

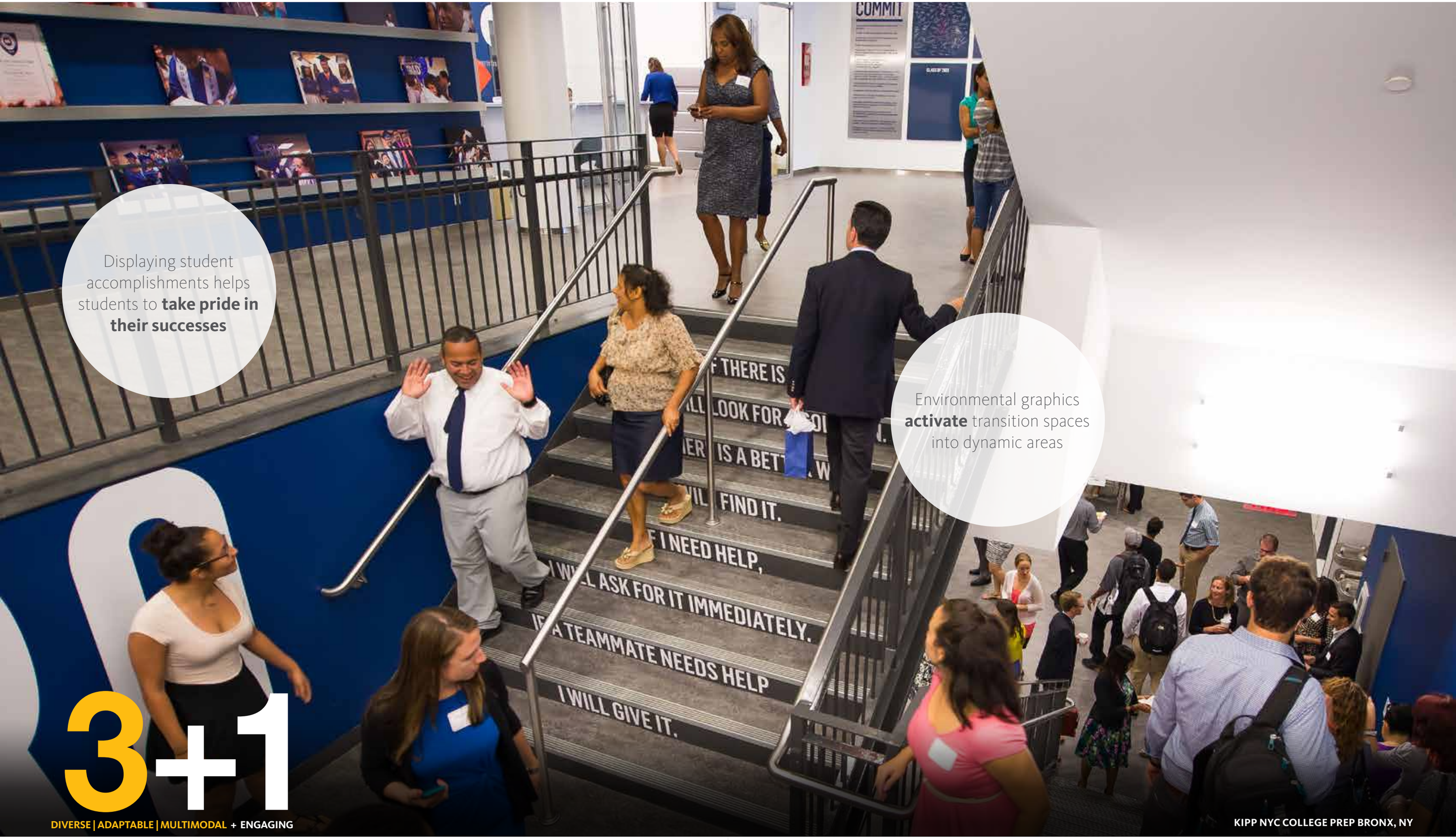
KIPP NYC COLLEGE PREP BRONX, NY



3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

CAMPBELL HALL EPISCOPAL SCHOOL, NORTH HOLLYWOOD, CA



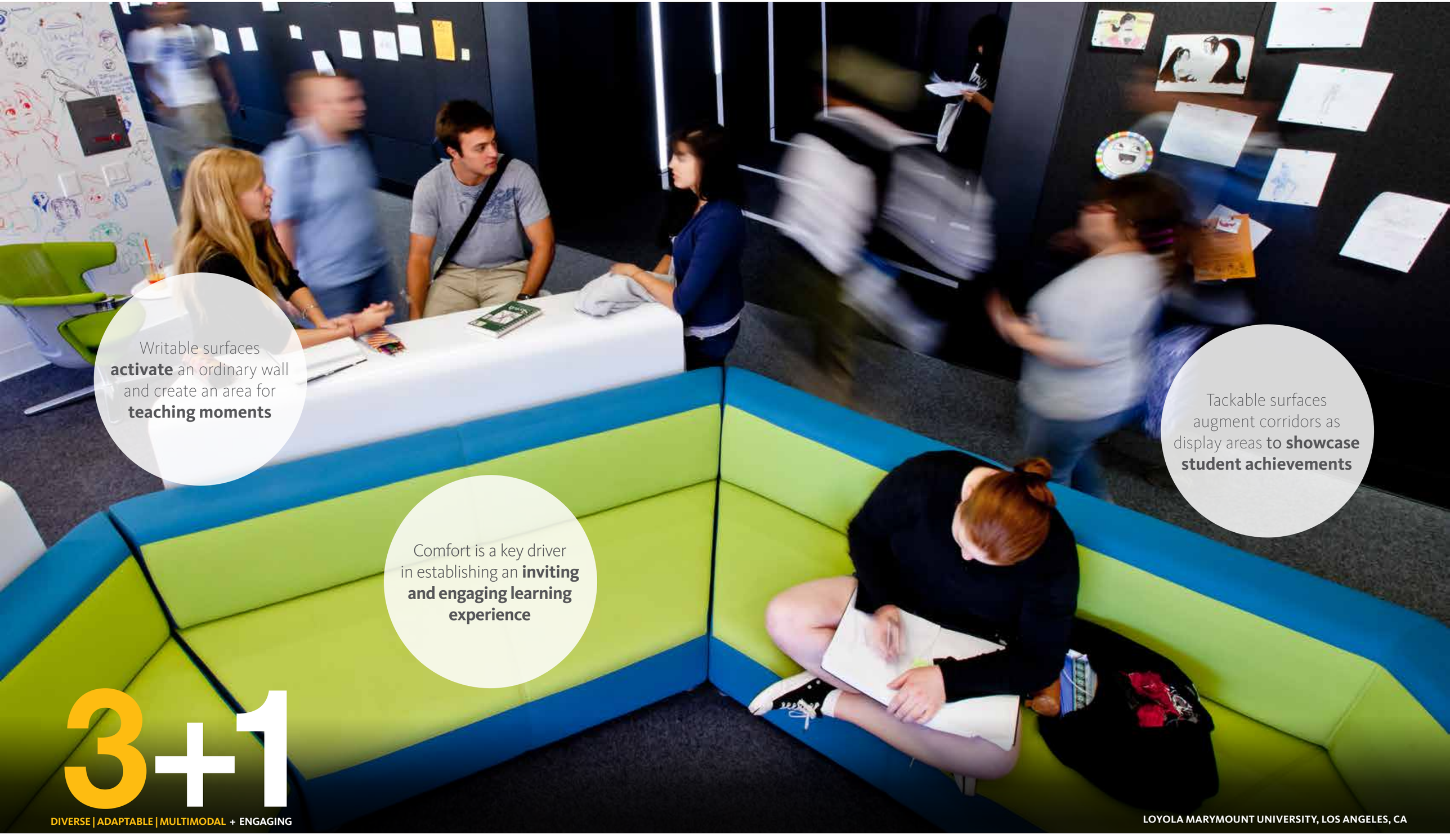
Displaying student accomplishments helps students to **take pride in their successes**

Environmental graphics **activate** transition spaces into dynamic areas

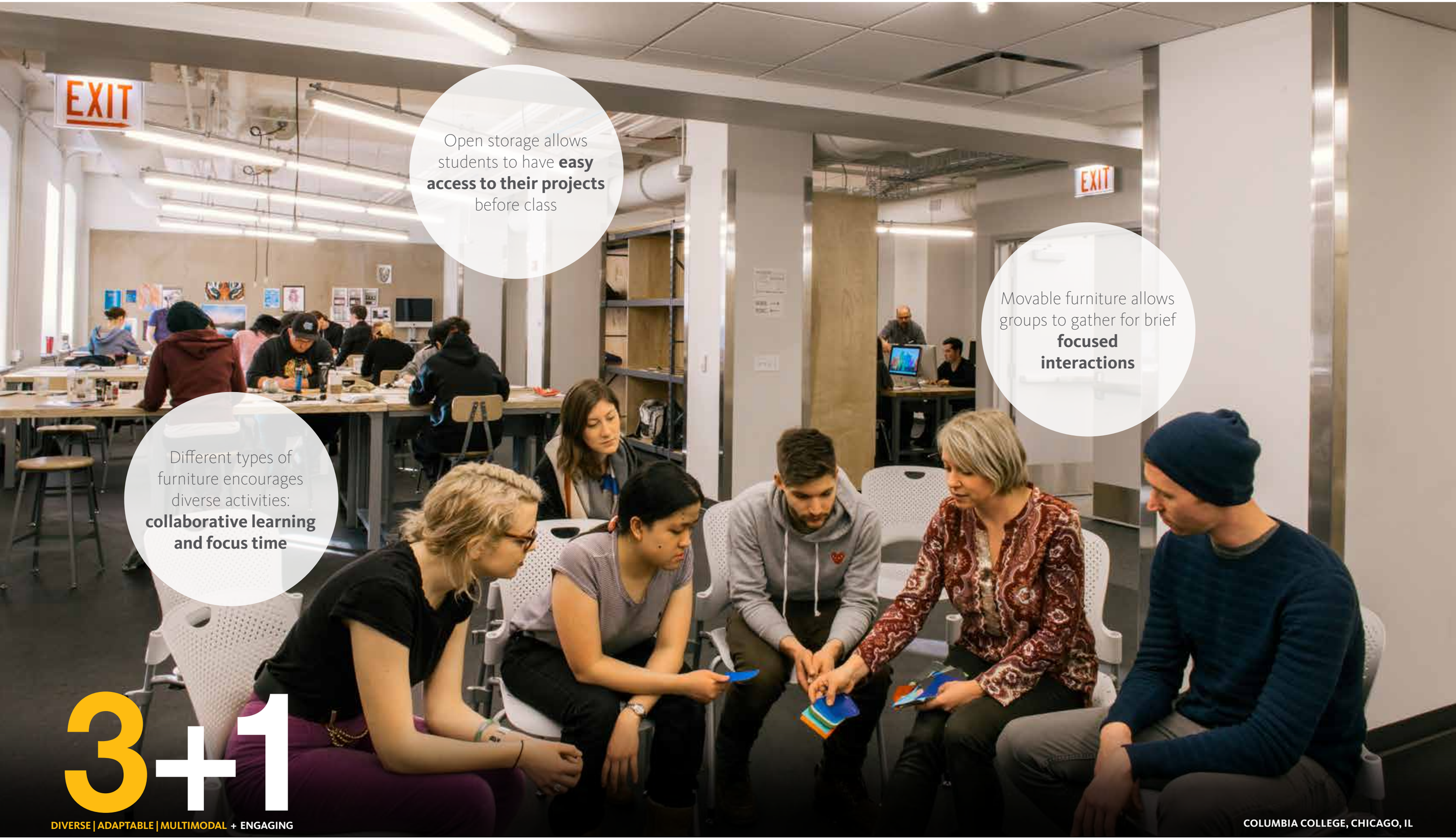
3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

KIPP NYC COLLEGE PREP BRONX, NY



LOYOLA MARYMOUNT UNIVERSITY, LOS ANGELES, CA



Open storage allows students to have **easy access to their projects** before class

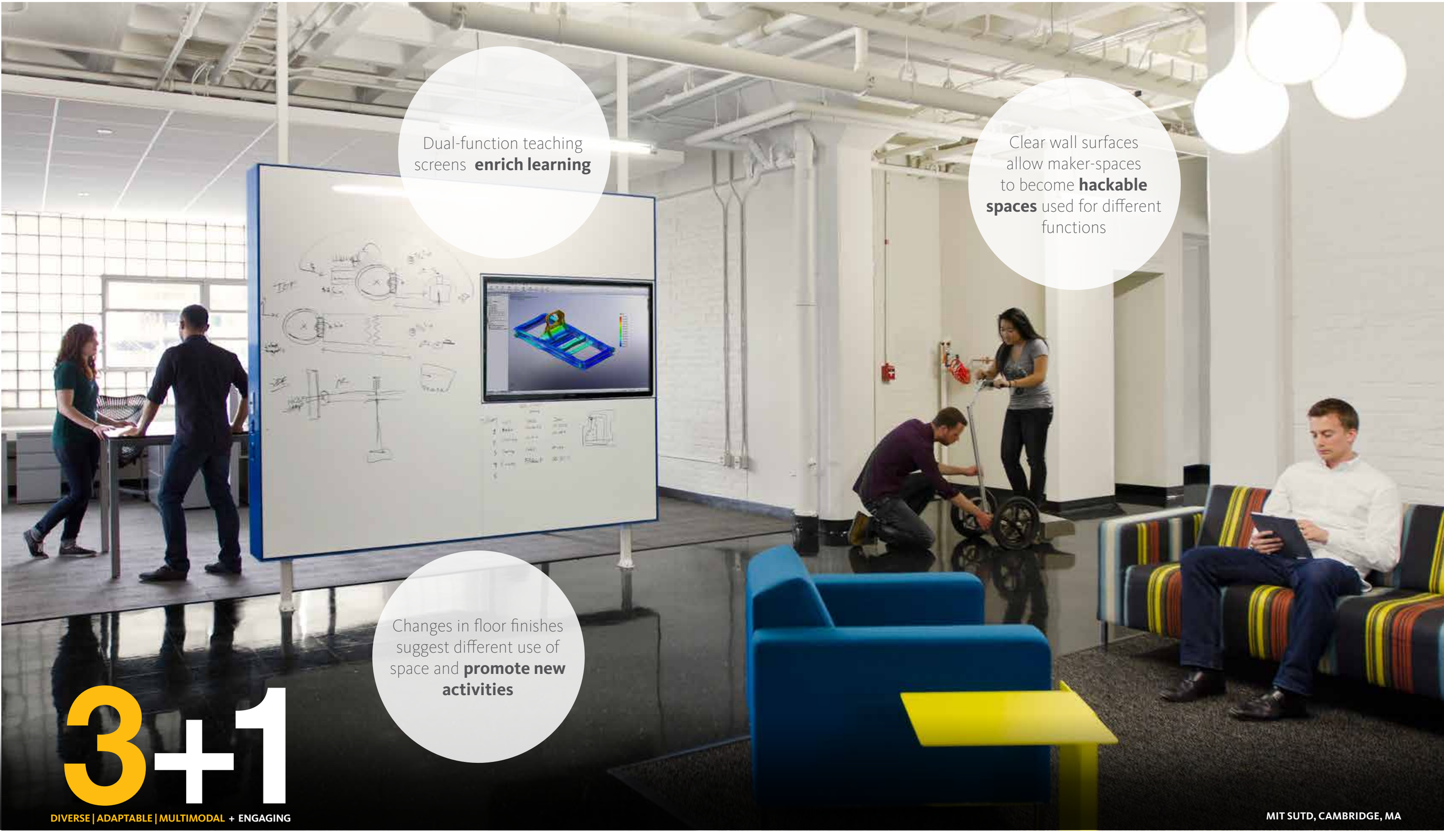
Movable furniture allows groups to gather for brief **focused interactions**

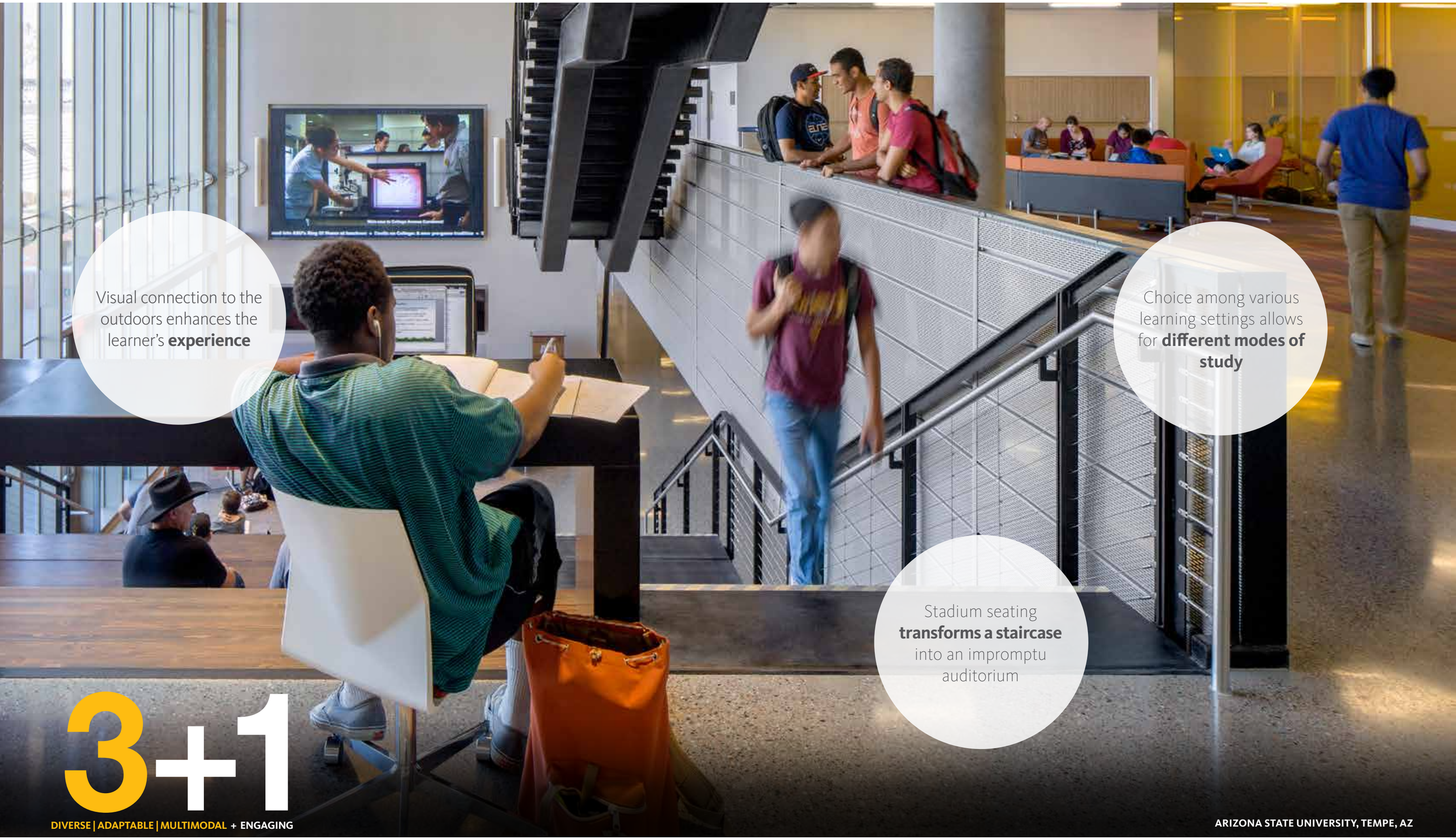
Different types of furniture encourages diverse activities: **collaborative learning and focus time**

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

COLUMBIA COLLEGE, CHICAGO, IL


Dual-function teaching screens **enrich learning**
Clear wall surfaces allow maker-spaces to become **hackable spaces** used for different functions
Changes in floor finishes suggest different use of space and **promote new activities**
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
MIT SUTD, CAMBRIDGE, MA



ARIZONA STATE UNIVERSITY, TEMPE, AZ

Non-linear lighting allows the space to be **used in different ways and orientations**

Easy access to technology provides students and faculty **full control** for lecture style teaching

Movable seating provides an audience with the **ideal line of sight** for a presentation

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

COLUMBIA COLLEGE, CHICAGO, IL


An optimal work surface allows use of multiple study materials so **real work** gets done
Diffuse lighting provides an effective environment for **individual tasks,** study, and reflection
Semi-enclosed furniture elements enable **individual focus** within an active, public setting
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
UNIVERSITY OF EAST LONDON, LONDON, UK

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

MIT SUTD, CAMBRIDGE, MA

Arrival points identify **orientation and place** and provide a destination for information exchange

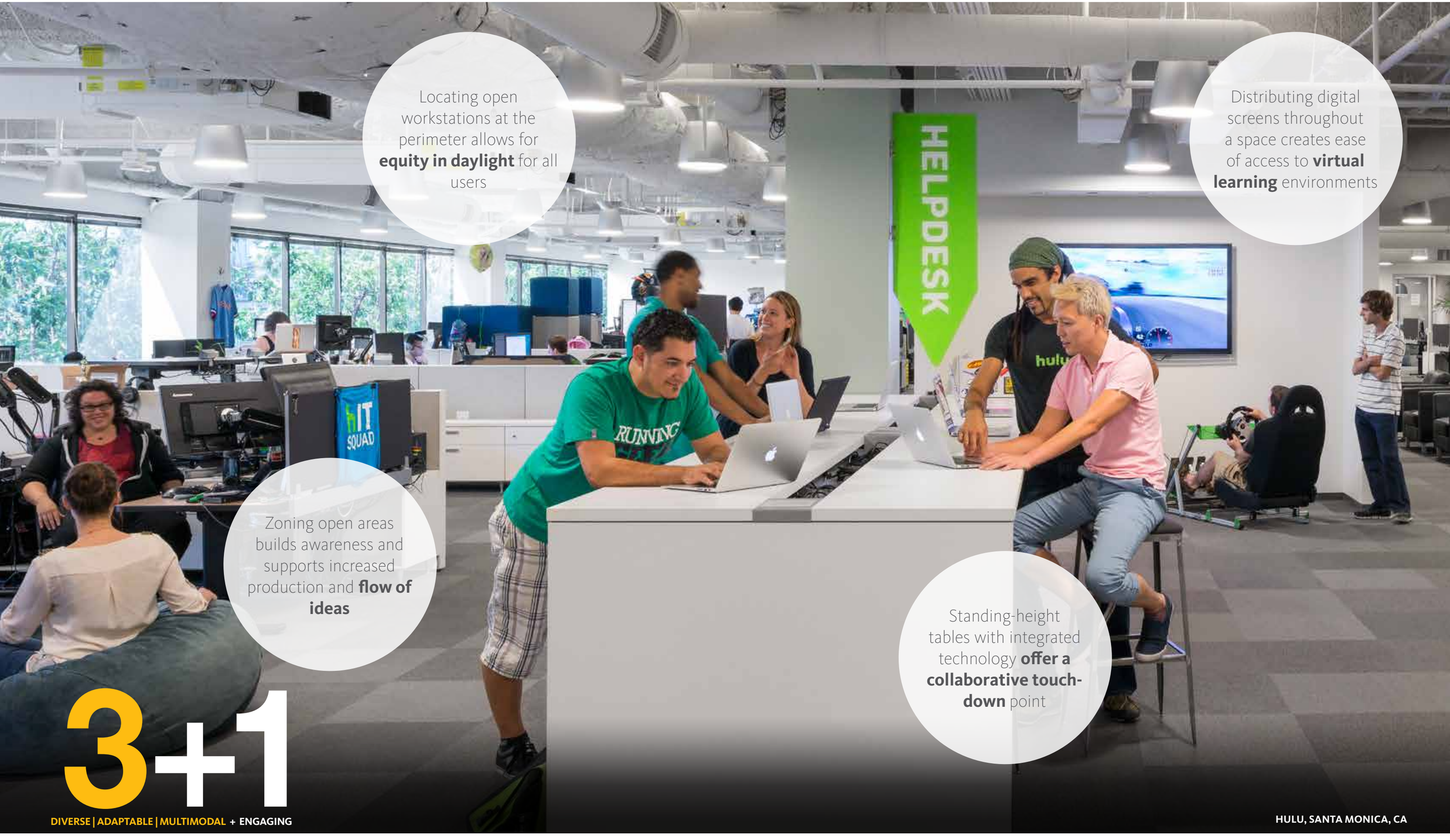
Digital interactive displays **leverage and enhance human interaction** and invite new kinds of engagement

Connection at the street level **draws the community in and increases exposure** to the outside

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

NOKIA PROJECT BLUE, LONDON, UK



Locating open workstations at the perimeter allows for **equity in daylight** for all users

Distributing digital screens throughout a space creates ease of access to **virtual learning** environments

Zoning open areas builds awareness and supports increased production and **flow of ideas**

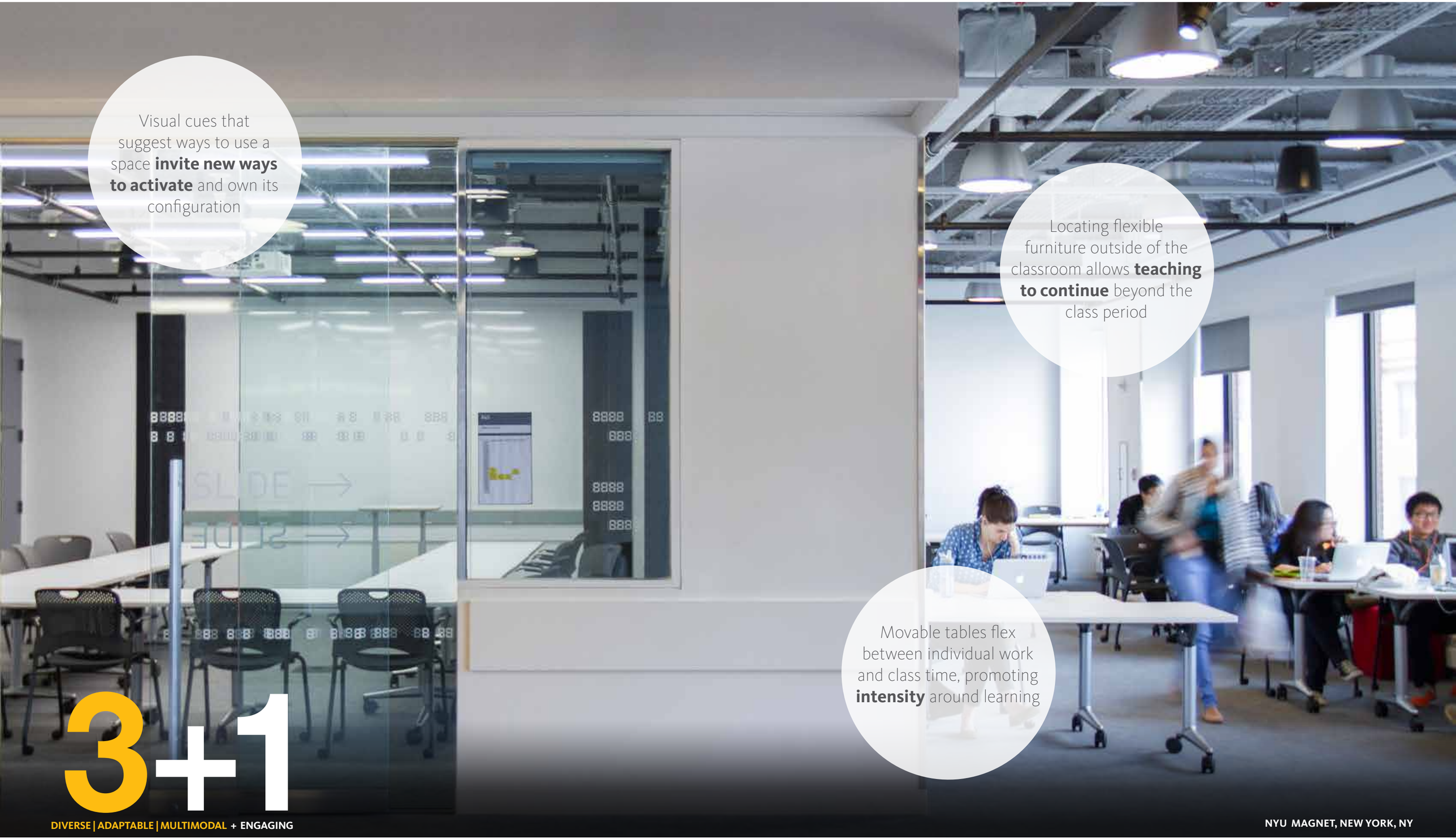
Standing-height tables with integrated technology **offer a collaborative touch-down** point

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

HULU, SANTA MONICA, CA


Writable glass walls **promote a culture of sharing** of thought process
A variety of seating configurations provides **choice** and cultivates autonomy
Comfortable furniture encourages people to **linger longer** beyond class time, activating the campus 24/7
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
ATT FOUNDRY, PALO ALTO, CA


Visual cues that suggest ways to use a space **invite new ways to activate** and own its configuration
Locating flexible furniture outside of the classroom allows **teaching to continue** beyond the class period
Movable tables flex between individual work and class time, promoting **intensity** around learning
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
NYU MAGNET, NEW YORK, NY

Built-in seating **activates circulation** to double as social gathering or team space

Locating writable surfaces in social spaces encourages an **integrated culture of collaborative** learning

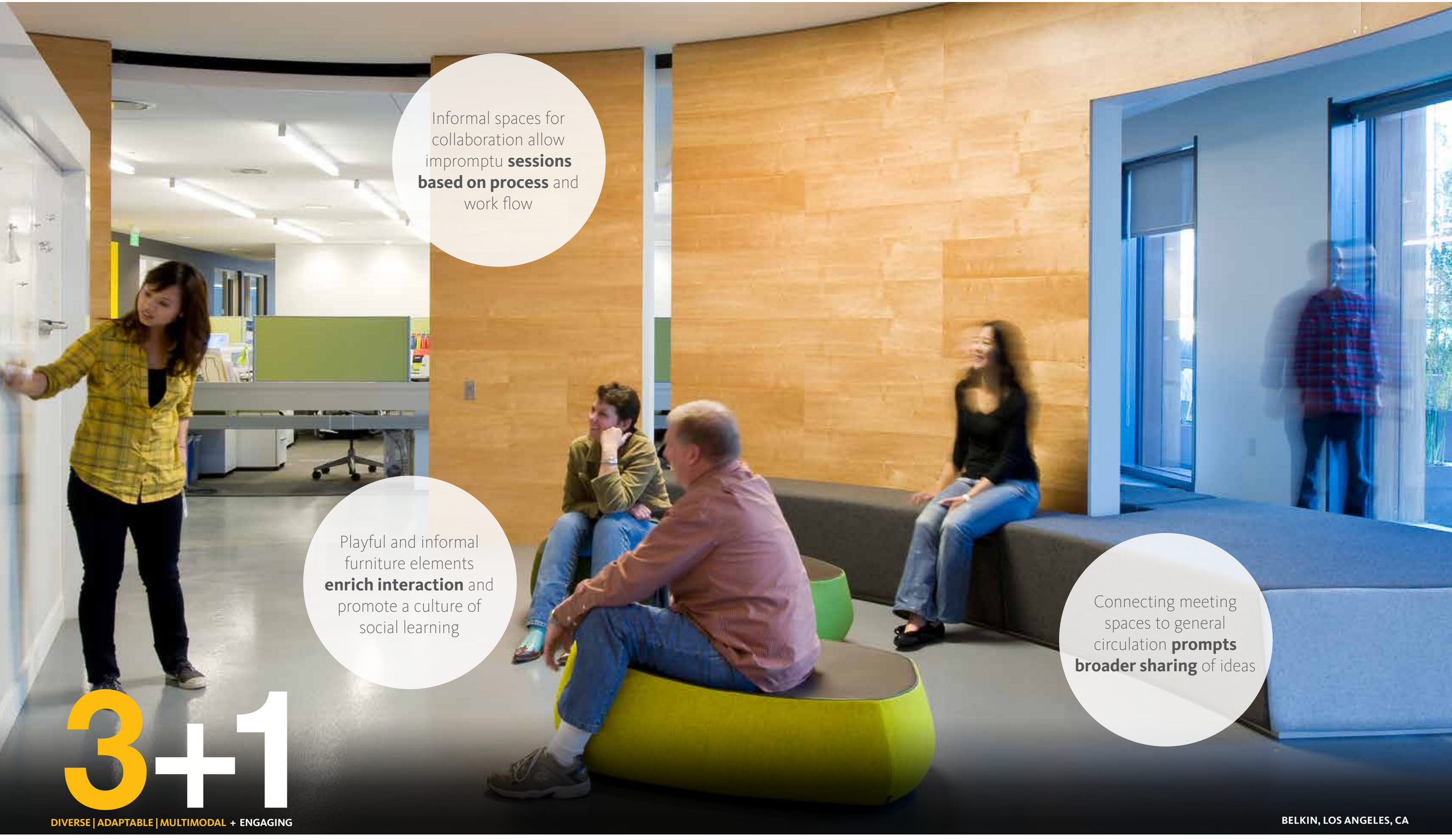
Change in floor pattern indicates a shift in activity and **suggests cues** for new behavior

3+1

DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING

22 SQUARED, ATLANTA, GA


Digital display size and placement helps **separate** large gathering areas from small group activities
Zoned furniture layouts **provide a framework to use** and change the space based on preference
Change in height, seating, and location **invites movement** between areas based on activity
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
ATT FOUNDRY, PALO ALTO, CA


Informal spaces for collaboration allow impromptu **sessions based on process** and work flow
Playful and informal furniture elements **enrich interaction** and promote a culture of social learning
Connecting meeting spaces to general circulation **prompts broader sharing** of ideas
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
BELKIN, LOS ANGELES, CA


A flexible grid of technical infrastructure allows for **multi-directionality** in orientation
Telescoping tiered seating **maximizes flexible use** for events, presentations, classes, and informal activity
Multipurpose spaces integrate presentation with practice, **simulating performance** in everyday experience
3+1
DIVERSE | ADAPTABLE | MULTIMODAL + ENGAGING
HOUSTON BALLET, HOUSTON, TX

reimagining learning

an annotated bibliography

Ambrose, Susan A. *How Learning Works: Seven Research-based Principles for Smart Teaching.* San Francisco: Jossey-Bass, 2010.

This book introduces seven general principles of how students learn. The authors have drawn on research from a breadth of perspectives (cognitive, developmental, and social psychology; educational research; anthropology; demographics; organizational behavior) to identify a set of key principles underlying learning, from how effective organization enhances retrieval and use of information to what impacts motivation.

Cary, Benedict. *How We Learn: The Surprising Truth About When, Where, and Why It Happens.* New York: Random House, 2014.

Carey sifts through decades of education research and landmark studies to uncover the truth about how our brains absorb and retain information. What he discovers is that, from the moment we are born, we are all learning quickly, efficiently, and automatically. Yet our education system seems to ignore valuable processes that enhance learning.

Harvard Graduate School of Education. *Creating Pathways to Prosperity, A Blueprint for Action.* Cambridge: Harvard Press, 2014.

The U.S. school-to-career system is highly developed in some ways and underdeveloped in others. Well-developed pathways function like pristine interstate highways for our most academically skilled children from relatively wealthy communities and households. They move smoothly from kindergarten through elementary, middle, and high school on to four-year colleges from which they graduate into careers.

Conversely, students possessing fewer academic skills (no matter what their family backgrounds) or growing up in less well-to-do families and communities, often face narrow and poorly maintained pathways full of potholes, detours, and missing road signs. The Pathways vision is that young Americans from all racial, ethnic, and socioeconomic backgrounds, and from all parts of the nation will complete secondary school, receive post-secondary preparation and certification for entry into viable careers, and then transition successfully into the adult world of work.

New Media Consortium. *NMC Horizon Report: 2014 K-12 Edition.* Austin: NMC Press, 2014

The internationally recognized NMC Horizon Report series and regional NMC Technology Outlooks are part of the NMC Horizon Project, a 12-year effort established in 2002 that annually identifies and describes emerging technologies likely to have a large impact over the coming five years in every sector of education in some 65 countries around the globe.

This volume, the NMC Horizon Report: 2014 K-12 Edition, examines emerging technologies for their potential impact on and use in teaching, learning, and creative inquiry in schools. While there are many local factors affecting the practice of education, there are also issues that transcend regional boundaries and questions common to K-12 education.

reimagining learning

suggested reading list

Christensen, Clayton M, Michael B. Horn, and Curtis W. Johnson. *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns.* New York: McGraw-Hill, 2008.

Disrupting Class points out that motivation is central to learning and that if schools and learning are to be transformed as they must be, motivation must be at the center of the work. They also point out how technology should be used to personalize learning and what the future might look like for schools.

Davidson, Cathy N. *Now You See It: How the Brain Science of Attention Will Transform the Way We Live, Work, and Learn.* New York: Viking, 2011.

Cathy Davidson and Duke University gave free iPods to the freshman class in 2003. This radical experiment is at the heart of Davidson's inspiring new book. Using cutting-edge research on the brain, she shows how "attention blindness" has produced one of our society's greatest challenges: while we've all acknowledged the great changes of the digital age, most of us still toil in schools and workplaces designed for the last century. *Now You See It* is a refreshingly optimistic argument for a bold embrace of our connected, collaborative future.

Heath, Chip, and Dan Heath. Switch: How to Change Things When Change Is Hard. New York: Broadway Books, 2010.

The Heath brothers speak energetically and encouragingly on how to modify our behaviors and businesses. Change is not inherently frightening, but our ability to alter our habits can be complicated by the disjunction between our rational and irrational minds. The trick is to find the balance between our powerful drives and our reason.

Medina, John. *Brain Rules: 12 Principles for Surviving and Thriving at Work, Home, and School.* Seattle: Pear Press, 2008.

In Brain Rules, Dr. John Medina, a molecular biologist, shares his lifelong interest in how the brain sciences might influence the way we teach our children and the way we work. In each chapter, he describes a brain rule - what scientists know for sure about how our brains work - and then offers transformative ideas for our daily lives. Medina's fascinating stories and sense of humor breathe life into brain science.

Pink, Daniel H. A Whole New Mind: Moving from the Information Age to the Conceptual Age. New York: Riverhead Books, 2005.

According to Pink, the keys to success are in developing and cultivating six senses: design, story, symphony, empathy, play, and meaning. Pink compares this upcoming "Conceptual Age" to past periods of intense change, such as the Industrial Revolution and the Renaissance, as a way of emphasizing its importance.

Pink, Daniel H. Drive: *The Surprising Truth About What Motivates Us.* New York: Riverhead Books, 2009.

According to Pink (A Whole New Mind), everything we think we know about what motivates us is wrong. He pits the latest scientific discoveries about the mind against the outmoded wisdom that claims people can only be motivated by the hope of gain and the fear of loss. Pink cites a dizzying number of studies revealing that carrot and stick can actually significantly reduce the ability of workers to produce creative solutions to problems.

Schwahn, Charles J, and Beatrice McGarvey. *Inevitable: Mass Customized Learning - Learning in the Age of Empowerment.* Lexington: Chuck Schwahn & Bea McGarvey, 2011.

Inevitable: Mass Customizing Learning (MCL) describes a detailed vision of how schools can change from the present outdated Industrial Age, assembly line structure to a mass customized learning structure with the capacity to meet the individual learning needs of every learner.....that's every learner, not some, not most, but every learner.

Tapscott, Don. *Grown Up Digital: How the Net Generation Is Changing Your World.* New York: McGraw-Hill, 2009.

Poised to transform every social institution, the Net Generation is reshaping the form and functions of school, work, and even democracy. Simply put, the wave of youth, aged 12-30, the first truly global generation, is impacting all institutions. Particularly, employers, instructors, parents, marketers and political leaders are finding it necessary to adapt to the changing social fabric due to this generation's unique characteristics.

Wagner, Tony, and Robert A. Compton. *Creating Innovators: The Making of Young People Who Will Change the World.* New York: Scribner, 2012.

In this groundbreaking book, education expert Tony Wagner provides a powerful rationale for developing an innovation-driven economy. He explores what parents, teachers, and employers must do to develop the capacities of young people to become innovators. Play, passion, and purpose: these are the forces that drive young innovators.


3+1
DIVERSE | ADAPTABLE | MULTIMODAL | ENGAGING

Gensler

Locations

Abu Dhabi
Atlanta
Austin
Baltimore
Bangalore
Bangkok
Beijing
Boston
Charlotte
Chicago
Dallas
Denver
Detroit
Doha
Dubai
Hong Kong
Houston
La Crosse
Las Vegas
London
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