The Language of School Design
Planning for the Conceptual Age

American Association of School Administrators

Texas Association of School Administrators

CEFPI Southern Region

Randall Fielding
Fielding Nair International & DesignShare

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Breakout Area
Soft Seating

Active Zone
Entry, storage, project work

Flex Space
Seminar, quite individual work, collaborative, or presentation

Learning Studio
Design Pattern # 1c
What does the marketplace ask learners today?

1. Can Someone Overseas Do it Cheaper?

2. Can a Computer Do it Faster?
What do learners need today?

- Industrial Age
- Information Age
- Conceptual Age*
  - Design
  - Story
  - Symphony
  - Empathy
  - Play
  - Meaning

* A Whole New Mind, Daniel Pink
The Guess Who Said This?

I see us being in the art business. . . . Art, entertainment and mobile sculpture which, coincidentally, also happens to provide transportation.
Guess Who Said This?

I see us being in the art business. . . . Art, entertainment and mobile sculpture which, coincidentally, also happens to provide transportation.

Robert Lutz
CEO of General Motors
According to latest research, IQ accounts for what portion of career success?

50% -- 60%
35% -- 45%
23% -- 29%
15% -- 20%
Left Brain is Supreme – Or is It?

According to latest research, IQ accounts for what portion of career success?

- 50% -- 60%
- 35% -- 45%
- 23% -- 29%
- 15% -- 20%

The Answer: 4% -- 10%
Conceptual Age Skills

Function + DESIGN
Data + STORY
Focus + SYMPHONY
Logic + EMPATHY
Rigor + PLAY
Wealth + MEANING
Our Company assumes that our competitors’ products have the same technology, price, performance and features. Design is the only thing that sets us apart.
Guess Who Said This?

Our Company assumes that our competitors’ products have the same technology, price, performance and features. Design is the only thing that sets us apart.

Norio Ohga
Chairman, SONY Corporation
Revenge of the Artists?

Harvard’s MBA program admits 10% of applicants

Guess what percent of applicants are being admitted by UCLA’s MFA Program?
Revenge of the Artists?

Harvard’s MBA program admits 10% of applicants

Guess what percent of applicants are being admitted by UCLA’s MFA Program?

TRY 3%

Today, the MFA is the new MBA
Narrative imagining – story, is the fundamental instrument of thought

Mark Turner

The Literary Mind
The conceptual age demands that we see the connections between diverse, and seemingly separate, disciplines.

Daniel Pink

Creativity generally involves crossing the boundaries between domains.

Mihalyi Csikszentmihalyi
The Elements of Symphony

1. Reading like a demon
2. The democracy of the Internet. Sharing ideas globally
3. Applying the lessons from one domain in another
Symphony - The Fundamental Principal

Seeing the big picture.
DESIGN
STORY
SYMPHONY
EMPATHY
PLAY
MEANING
Empathy is not sympathy. It is the ability to experience the world from another’s perspective.
Play will be in the 21st century, what work was in the last 300 years – our dominant way of knowing, doing and creating value

Pat Kane, author of the Play Ethic
S.E.E.D. Treasure Card

DESIGN

STORY

SYMPHONY

EMPATHY

PLAY

MEANING
DESIGN
STORY
SYMPHONY
EMPATHY
PLAY
MEANING
Bringing Meaning to Planning

Measuring the things that are most important. The “Patterns” that bring joy and fulfillment and prepare students for the conceptual age.
Why Patterns?

We are hard wired to recognize patterns. That’s how we process information—not in discrete pieces, but in visual, auditory and kinesthetic patterns.

Patterns allow us to jumpstart the planning and design process and get the big picture.
Evolution of the Ford model. The corridor is expanded to become a collaborative area.

Early 20th century school design standard, modeled after Henry Ford’s factory production methods.

Traditional Plan and Ford Model Evolution
Design Patterns #1 and 1a
Breakout Area
Soft Seating

Active Zone
Entry, storage, project work

Flex Space
Seminar, quite individual work, collaborative, or presentation

Learning Studio
Design Pattern # 1c
Learning Suite
Design Pattern # 1d

Movable wall, screen, storage units or bookshelves
Breakout Area

Studio A

Studio B

Each studio has its own entry, breakout area, and outdoor connection, and may operate as a single studio or combined with the adjacent studio into a learning suite.
High Tech Middle School, San Diego
Carrier Johnson
Block 2 – Learning Community

- 6 “L” shaped classrooms
- Lockers
- Stairs
- Science room
- Teacher preparation and storage
- Elevator
- Storage
- Open work area
- Movable 2 all option
- Town center option A
Advisory-based
Small Learning Community
Design Pattern # 1f
Welcoming Entry
Design Pattern # 2

Warren Skaaren Environmental Learning Center
Dripping Springs, Texas
Jackson & McElhaney Architects
Tackable surface for student work
Rear projection display for interactive display of student media projects
Horizontal surface for 3-d project display

Student Display
Design Pattern # 3
Family-like Group

Coat Hooks  Project Table  White Board

Each student has a desk and two drawers  Book shelf

Home Base and Individual Storage
Design Pattern # 4
Grainger Center for Imagination and Inquiry at the Illinois Math and Science Academy Aurora, Illinois, OWP&P Architects

Science Labs and Life Skills

Design Pattern # 5
Art, Music and Performance
Design Pattern # 6

Movable screen, suspended from structural grid at ceiling, allows for rapid reconfiguration of space.

Insulated, glass panel rolling overhead door.

Mobile seating risers.

Outdoor seating area.
Ross School
New York
Cook plus Fox Architects

Physical Fitness
Design Pattern # 7

Natural light and ventilation are important in active spaces.

Active spaces and equipment directly adjacent to indoor fitness areas encourage healthful, outdoor activities in all seasons.

Resilient wood or synthetic sports flooring, mirrors, ballet bars, and higher ceilings support dance, yoga, and exercise equipment without requiring a full gymnasium.
Casual Eating Areas
Design Pattern # 8
Paschalisschool
The Hague
Atelier PRO Architects
Vistas of 50 feet (15 meters) or more allow us to change our focal length, important to both eye health and comfort.

**Interior and Exterior Vistas**

Design Pattern # 10
Student video production and music recording studio

Student radio station broadcasts to community

Wireless network allows students to learn and work anytime and anywhere on campus

Ceiling-mounted and mobile data projectors allow students to present their work to advisors and peers.

Dispersed Technology
Design Pattern # 11
A nature trail, while supporting studies in biology, ecology, botany, and animal behavior, can also serve as a running track, becoming a vital part of a physical education program.

Indoor-Outdoor Connection, Nature Trail, Running Track
Design Pattern # 12
Skaggs Catholic Center
Draper, Utah,
MHTN Architects

Electrical power, wired and wireless connections turn soft seating areas into high powered work spaces.

Movable seating allows learners to modify their environment.

Visitas to the city, community activities or nature foster broad-based rather than narrowly referenced thinking.

Soft Seating
Design Pattern # 13
Ipswich Middle School, Flansburgh Associates

Campfire Space, Distance Learning, Strong/Soft Sound

Design Pattern # 15
Watering Hole
Design Pattern #16

School Design Pattern Language
A graphic vocabulary for 21st Century Learning Environments

Left: Tajimi Junior High School
Japan, Atelier Zo
Learning Street—“Watering Hole”

Peel Education and TAFE Campus
Mandurah, Australia,
Spowers Architects
Two or three solid or semi-solid sides to provide a sense of enclosure

Soft seating

Pathway

Cave Space, Alcoves, Niches
Design Pattern # 17
Canning Vale
High School, Western Australia
Fielding Nair International, Vitetta & Spowers Architects

Daylighting
Design Pattern # 19

Light shelves bounce light off the ceiling, allowing for greater penetration into the room, beyond the 1:1.5 rule of thumb. Deciduous trees block harsh summer sun and allow winter sun.

Depth B = 1.5 A

It’s useful to distinguish between view window and daylighting windows. The higher the window the greater penetration into the building. One rule of thumb calls for the depth of the room to be 1.5 X the height of the window.

Flexible furnishings allow for collaborative and project-based learning.

Alcoves for small groups and individuals to assimilate learning.

Abundant daylighting improves test scores and spiritual outlook.

Fluid connection to outdoor learning spaces encourage naturalist and kinesthetic intelligences.

Movable partitions allow for adaptability by learners.
Sustainable Elements and Building as a 3D Textbook
Design Pattern # 22

Warren Skaaren Environmental Learning Center
Dripping Springs, Texas
Jackson & McElhaney Architects
Building as “3D Textbook”

Colegio Altamira (High School)
Penalolen, Chile
Mathias Klotz, Architect
Amphitheater at Swarthmore College, 1931

Sustainable Elements
Cars out of Sight

Design Pattern # 23b

Parking divided into small pockets, separated by landscaped paths, and located at lower elevations, out of primary site lines.

Berm and or garden wall, benches, steps, and plantings.
Bringing it All Together

Design Pattern # 25

Morriss Center Design Concept
Vocational School in Sri Lanka
19th Century Model

Conceptual Diagram of a 19th & 20th Century Approach to Site Planning (Site Figure 1)
Guidelines for Vocational Schools in Sri Lanka 21st Century

Conceptual Diagram of a 21st Century Vocational Education Center (Site Figure 2)
We Learn All the Time
18 Learning Modalities

1. Independent study
2. Peer tutoring
3. Team collaborative work in small and mid-size groups (2-6 students)
4. One-on-one learning with the teacher
5. Lecture format with the teacher at center stage
6. Project-based learning
7. Technology based learning with mobile computers
8. Distance learning
We All Learn Differently
18 Learning Modalities

9. Research via the Internet with wireless networking
10. Student Presentation
11. Performance-based learning
12. Seminar-style instruction
13. Hands on project based learning
14. Naturalist learning
15. Social/emotional learning
16. Art-based learning
17. Storytelling (floor seating)
18. Team teaching
Patterns Workshop

- Social
- Emotional
- Inspirational

- Safe Space
- Group Space
- Team Cooperative Demonstration
- Audience
- Flexible
- Indoor-Out
- Connections to Community
INDEPENDENT LEARNING SPACE

- INDIVIDUAL WORK SPACE
- STORAGE
- NET/ DATA ACCESS/ Gig12Mo
- TOOL/ MARKER/ PERSONALIZE
- LIGHTING CONTROL
- HEADPHONES
- KIDS + TEACHERS
- INST. DIGITAL, SEMINAR, HANDSON
- FLEXIBLE TIME
- SCORE 15-25/ TEACHER 75-125 TOTAL
- LGI
- STUDIO/ PROJECT AREA
- ORANGE LEVEL OR VERTICAL?
- SCHOOL SIZE?
MODALITIES

- Technology/Research
- Hands-on/Project Based
- One-on-One
- Team Collabor/Peer Tutoring
- Seminar Style/Student Representation
- Naturalist
- Storytelling/Team Teach's/Social Emotional Learning
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