Evolution and Stagnation in the Architectural Design of FBISD Elementary Schools

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Introduction

The art in architectural design is the balance between beauty and functionality; between the aesthetic and the feasible. It is supposed that architecture both shapes life and is shaped by life, thus over time through its design one might discern the values of the time, for as time passes societies, trends, values, etc. naturally evolve. With such shifts, there exists a transformed definition of what is functional, what is desired, what is necessary within our physical environment, in our homes, in our schools.

FBISD is a fast growing school district established in 1959 and home to over 50 elementary schools. The elementary school years are indubitably formative ones.Young children are impressionable to their environments and education is such an important aspect of growth and development that the nature of the school environments that many currently operate within are of interest.

Thus, it is the objective of this study to analyze and understand whether and how design within FBISD elementary schools has shifted over time, in what manner and where its development is currently headed.

Methodology

In order to analyze the trends in architectural design across a significant time period within the education industry, the elementary schools of Fort Bend ISD were selected as a sample. The 51 elementary schools ranging from Blue Ridge ES built in 1969 to Ferguson ES, scheduled to welcome its first class in the 2023-24 school year, were systematically evaluated in terms of general layout and form, incorporation of the outdoors, characteristics of the facade, materials used, spacial distribution, unique interior characteristics, etc. through a combination of google maps, in person observation and blueprints, and the individual school websites. The acquired information was catalogued and compared so that patterns in design might be discerned and a generalized timeline noting trends established.

Results: The Evolution of the Floorplan

1969 - 1976

Flat elongated rectilinear layouts with external walls of largely unimpeded mix of concrete and exposed Lilesville white quartz aggregate dominate.

1978 - 1981

The layout becomes nearly square with a repeated rectangular protrusion of building and a singular indented corner.

1984 - 1988

A new style emerges maintaining the elongated rectangular center and the rigid geometric form. It gains a perpendicular rectangular section at its middle creating a sort of cross from the aerial view, a consistent brick facade and the accent of a colored tile.

1989 - 1994

This model was again simple and largely rectangular, although it had gained width, a rotund protruding facade and a new quad tile exterior embellishment.

1994 -2000

The layout becomes relatively equilateral as the roof radiates outward at a slope from a defined center leaving near petal -like protrusions of building and space between pods.

2000 - 2015

A new series of layouts emerges, each notably increasing the external surface area of the school. A 2nd floor begins to emerge with a staggered exterior, along with an exaggerated 3 pod layout amd an L-shaped layout.

2015 - 2023

The layout of schools becomes less centralized with pods moving in pointedly different directions allowing for increased window space and room for accessible outdoor learning areas.

Characteristics of The New Elementary School

1. Collaboration spaces at the end of each pod, flexible and conducive to multiple purposes
2. An emphasis on the library as a central social space
3. Emphasis on outdoor learning in the form of shaded outdoor classrooms
4. An emphasis on the importance of natural lighting demonstrated through increased window space

https://photoarchitect.com/education

Findings

Based on the cataloged findings of the study it is visible that within the FBISD elementary schools, design has fluctuated and stagnated with particular designs becoming extremely popular for a number of years and then being replaced by newer, often more complex designs. Generally speaking the design trends tend from the more simplistic, staunchly rectilinear and even box-like, to the more complex. Complexity of design is seen first with the addition of a curved exterior wall in the 1989-1994 layout which was replicated almost exactly in 7 separate schools within the 5 year period. Design evolves to incorporate a more centralized layout in the 1994-2000 model again rendered almost exactly 7 times in the short period. This is perhaps the most fluid layout, lacking in the rectangular edges of designs before and after it. The 2000s stray away from constructing near exact replicas of schools as was done in the 90s allowing for greater variation in design and ultimately an emphasis on increased exterior surface area as demonstrated by the developing pod styles. Perhaps, in the past 5 years there has been the most variation in architectural layouts as design seems to take liberties in applying a pod structure in new and interesting ways resulting in floorplans like the dog-shape of Neill ES and the alternately spiking one of Sullivan ES. In a more technical sense there has also been a shift in the allotment of window space and the emphasis on outdoor learning spaces, the openness of indoor social and collaborative spaces (ex: libraries).

Discussion

Analyzing the evolution of architectural design in elementary schools is a dynamic way of understanding how education is altering, adapting to the needs of the student and demonstrating the changing values of society. The study is limited in that it is simply an assessment of physical patterns in design, rather than a deep look into why such patterns may have existed. Thus the research could be expanded upon by comparing the trends within education with trends in society, economy and politics. It may be suggested that following Covid-19 educators have come to place more value on collaboration as a tool in acquiring social skills. Perhaps that contributes to the prevalence of collaboration areas in newer schools. Perhaps it is the awareness of climate change that has architects and districts alike seeking more ways to connect children with nature. Perhaps it is research done on the importance of natural light in the workspace carrying over to education design.