

Elevate student engagement by rethinking classroom environments

by Fleetwood Furniture



Top photo shows classroom prior to change-out of furniture.

Middle photo shows classroom with elevated environment.

Bottom photo shows elevated environment during teaching mode transition.

As student age, their engagement in school drops dramatically – from a high of 74% in fifth grade to a low of 33% in high school per Gallup. But what can schools do about it? Most have examined teaching methods, technology usage, and student behavior patterns, but not many have delved into a fourth critical dimension – the actual classroom space.

In 2017, Fleetwood Furniture began a multi-year study of in-depth classroom observations and experiments to better understand if engagement levels could be changed by changing the classroom environment. The company believed that benefits could be reaped from creating applications that connected subjects and classroom activities better with the 'real' world; kept students in motion by giving them voice, choice and hands-on options; and connected them to teachers and other students through positive relationships and communication. But it didn't know what this looked like in practice, so the company moved from secondary to primary research techniques to understand classroom dynamics better.

After doing hundreds of hours of observations, several hypotheses were formed about ways to increase student engagement via modifications to the physical space. Holding teaching methods and technology constant, Fleetwood tested the following hypotheses:

HYPOTHESIS #1:

Elevating students encourages better posture, stronger cores, more movement and higher attention levels

HYPOTHESIS #2:

Elevating students encourages higher quality interactions with teacher and other students

HYPOTHESIS #3:

Backless, non-handed chairs increase how often students face classroom focal point.

HYPOTHESIS #4:

Movement stimulates engagement

HYPOTHESIS #5:

Increased student and teacher movement + Increased circulation space = Better connection

Fleetwood then linked with Hope College's Center of Excellence and set up experiments in four classrooms in three different schools that involved more than 500 students and 400 hours of video-ethnography that was dissected and analyzed. In addition, student, teacher and occupational therapist interviews were conducted during select points in the studies. To test the hypotheses, classes were first videoed with existing furniture. These classrooms consisted of standard seated-height tables or desks with plastic-molded student chairs that had fixed backs. Some of the chairs had casters on them, while others did not. After logging base performance levels, the existing furniture was removed and replaced with 1) smaller-scale standing-height tables and 2) stools featuring a backless design with a non-handed modulating seat pan.

The results were shocking. Ten out of 12 class periods showed significant improvement in student engagement levels with improvement ratings between 13-70%. Improved engagement showed itself in many ways. The researchers noted lower sleep rates, fewer heads on desks, decreases in students' side conversations, less touching of other students, better eye contact with the teacher and point of focus in the classroom, and more alert body positions – to name just a few. Students in three out of four classrooms preferred the elevated solution. Teachers reported improved student-teacher interaction, better student posture, and smoother transitions from one teaching mode to another. The occupational therapists were also impressed. They called out the ergonomic benefits of the high, backless stool. They stated it increased students' activity levels to maintain posture which led to higher potential for attention and focus.



Top photo shows new group dynamics with standing-height solution. Bottom photo demonstrates eye-to-eye interaction with teacher.

The takeaways translate into simple, yet effective changes in design planning. These include:

- Create more “alert” postures via backless, modulating stools
- Activate the core and improve posture via sit, stand and perch options
- Promote movement & posture changes with standing-height stools and tables
- Support fidgeting for all versus unique modulating seat solutions for a few
- Allow students to “face the focus” easily without craning necks via backless, non-handed stools
- Encourage teacher circulation with smaller worksurfaces and stools the can slide under tables
- Create eye-to-eye connection by letting students stand versus forcing teachers to bend or kneel
- Eliminate dominating positions where teachers look down on students in seated-height desks
- Stand more and bend less to promote wellness

If you want to learn more about the study, visit the Fleetwood's website at fleetwoodfurniture.com or request a discussion with one of our furniture dealers or sales representatives.



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