

Active Learning

The Effects of a Stimulating Learning Environment

A pilot project with Ohalo Academic College, Quatzrin (Israel) and Steelcase Education combining interactive pedagogy within an active learning environment.



A NEW APPROACH

A dynamic and constantly changing reality requires adaptation and change in educational approaches: the student is no longer to be seen as a passive receptacle for knowledge, but as an active participant in the construction of knowledge. This approach requires a substantial change in the teaching process and it challenges the traditional hierarchical teacher-student relations as well as the physical learning environment.

Today the learning environment should be flexible and dynamic to be adaptable to the changing needs of the teaching-learning process. This flexibility facilitates changes in the teacher-student interaction and improves the performance of various teaching-learning methods such as: teaching in a plenary session, peer learning, group learning, etc.

It is also important to provide easy access to information for students. The learning environment needs to integrate the technical infrastructure allowing the student to collaborate with others and to interact with the teacher.

The environment should create learning “opportunities”; spaces that facilitate investigation and building of knowledge and skills. The interaction between the design of physical spaces, integration of technology and new teaching methods gives rise to a more holistic “learning-oriented design concept”.

PROJECT SCOPE

The recognition of the gap between modern and traditional approaches has led to a pioneer project at the School of Education, Ohalo Academic College, Qatzrin (Israel) and Steelcase Education.



The scope was to create an experimental combination of interactive pedagogy within an innovative learning environment supported by technology. The physical learning environment should allow for a variety of teacher- student interactions by offering diverse types of “settings” through which students can have different learning experiences.

Studies have demonstrated that the construction of a purpose-built learning environment influences attention, motivation and academic achievement.

A NEW LEARNING EXPERIENCE

Ohalo worked with Steelcase Education to design and outfit a series of active learning classrooms to bring their vision to reality.

We wanted to understand to what extent does the design of a learning environment improve motivation to learn and how does the teacher perceive the influence of the new learning environment in comparison to the traditional classroom.

The research sample was composed of 87 multicultural students and 12 teachers at the Ohalo College, Qatzrin (Israel). They completed the Active Learning Post-Occupancy Evaluation questionnaire online at the beginning and the end of the semester.



The following parameters were used for the active learning evaluation:

- Ability to be creative
- Motivation to attend class
- Ability to achieve a higher grade
- Engagement in class
- Collaboration
- Focus
- Active involvement
- Opportunity to be committed-involved
- Use of varied means
- Feedback in class
- Scenarios from daily reality
- Optimal learning methods
- Physical movement in space

- Stimulation
- Performance
- Enriching experience

A CYCLICAL LEARNING MODEL

The interactive process is based on a cyclical model of dynamic learning evolving from individual research to group debate.

The study starts on an individual level and evolves to peer and groups of different sizes up to the creation of a “learning community”. Problems and questions will be presented and co-students are invited to come up with answers based on online research.

1. **Define** the topic to address
2. **Research** individual research on the topic
3. **Confirm** the research direction by the teacher
4. **Debate** the individual findings within a small group
5. **Solve** choose the solution within the group
6. **Plan** the next steps
7. **Approve** the solution and plan by the teacher
8. **Implement** solution

ENCOURAGING RESULTS

Over 80% of respondents reported an important increase in creativity, motivation and engagement in class while studying and teaching in the new learning environment.

The learning environment facilitated the use of technology and empowered students and teachers, a key element for motivation. A significant increase in overall engagement can be observed.

PERCENTAGE REPORTING INCREASES IN

	Instructors (n=15)	Students (n=87)
Creativity	100%	95%
Motivation	100%	87%
Performance	93%	83%
Engagement	100%	92%

AVERAGE SCORE STUDENTS

	New Classroom	Old Classroom
Teaching Methods	39%	27%
Learning Space	40%	25%

AVERAGE SCORE TEACHERS

Teaching Methods	41%	24%
Learning Space	42%	21%

On every parameter the learning and teaching experience was improved notably on physical movement and general stimulation. They gave significantly higher evaluations for teaching methods and learning spaces in the new vs. traditional classrooms and perceived working there as more stimulating.

To maximize student success, the learning and teaching experience must evolve to support the generative activities and peer-to-peer learning. This pilot project shows that innovative classrooms and teaching methods can enhance problem solving, communication and collaboration — the skills demanded of today's students.

TEACHING METHODS

	New Classroom	Old Classroom
Collaboration	100%	82%
Focus	92%	86%
Active involvement	98%	82%
Opportunity to engage	98%	92%
Multiple means	100%	76%
In-class feedback	96%	82%
Real-life scenarios	94%	84%
Ways of learning best	96%	76%
Physical movement	100%	54%
Stimulation	94%	64%
Comfortable to participate	100%	90%
Enriching experience	96%	80%

LEARNING SPACES

	New Classroom	Old Classroom
Collaboration	98%	82%
Focus	96%	81%
Active involvement	98%	82%
Opportunity to engage	100%	72%
Multiple means	98%	76%
In-class feedback	96%	76%
Real-life scenarios	98%	68%
Ways of learning best	100%	70%
Physical movement	98%	64%
Stimulation	100%	78%
Comfortable to participate	98%	76%
Enriching experience	100%	72%

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