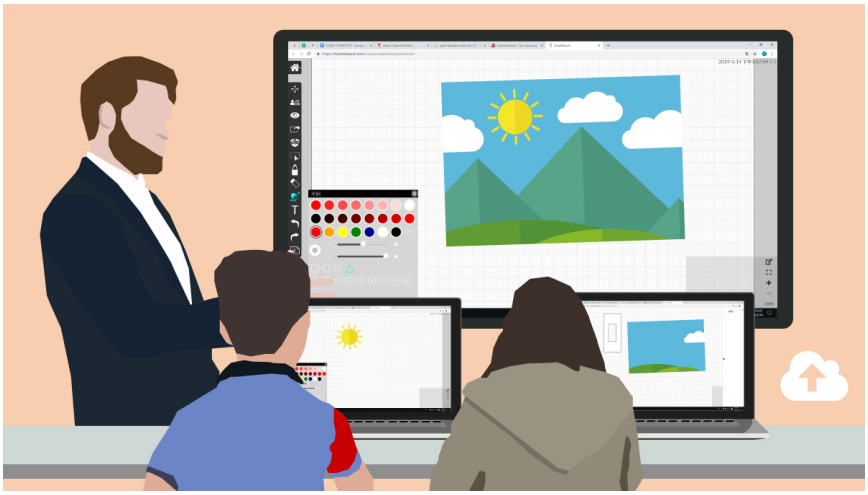
THE COMPLETE GUIDE TO SCALE-UP IN EDUCATION

Gouldian Finch | January 10, 2019 Education



Collaborative, hands-on, and computer focused. This describes SCALE-UP in a nutshell.

From their first classroom integration in the 80s to today, over 98% of schools in the United States now own computers. What's more is that while the ratio of students to computers was once quite poor, the national average has risen considerably to the near-gold-standard ideal of 1.8:1.

With such integration comes a much-needed revision of traditional teaching practices. For instance, how can professors claim the attention of their students who can easily engage personal screen as a means of distraction? It's a cultural tide that's proven difficult to fight.

The answer is as simple as this common adage - If you can't beat them, join them. With that in mind, several university-level institutions have taken the bold step to research, codify, and implement a comprehensive strategy that addresses the need for computer-aided collaboration in the classroom with an eye towards interactivity and media integration. That's where SCALE-UP comes in.

SCALE-UP - What is it?

Most recently standing for Student-Centered Active Learning Environment with Upside-down Pedagogies', SCALE-UP refers to learning environments that have embraced active, collaborative in a manner that alters traditional classroom processes and layouts.

With an emphasis on the Socratic method, SCALE-UP classrooms encourage group work that focuses on the dual-goals that are tangibles and nondurables. Referring to hands-on observations and interesting problems, respectively, these goals dictate the nature and layout of SCALE-UP classrooms in a direct and concrete manner. As a result, lectures are discarded in lieu of class-wide discussions, and the rows of seats facing the front are thrown out in favor of seat clusters that enable the room to resemble a restaurant much more than a traditional education setting.

The principles of SCALE-UP

As a result of academic research, trial, and error, SCALE-UP is much more than an altered seating chart and a discussion-based lesson plan. More to the point, SCALE-UP's processes

are heavily defined by its underlying principles, the details of which will now be elaborated on.

Collaboration & Interactivity

In a SCALE-UP class, boring teacher-student lectures become a thing of the past. In fact, the role of a teacher becomes closer to that of a classroom facilitator than that of a traditional professor.

More explicitly, the SCALE-UP classroom places an emphasis on classroom discussions and inquiry-based learning. Thusly, collaboration becomes the name of the game. This is particularly the case when, both outside the classroom and in, much of the interaction takes place digitally.

Digital interactivity, particularly those facilitated through cloud-based collaboration platforms, ensure that the tenets of SCALE-UP transcend the confines of class time.

Content Chunking

Imagine the assignment of an enormous project. Everyone has experienced that momentary feeling where the prospect of completion is daunting, and it's possible that performance is affected as a result.

In the context of SCALE-UP, as is also the case in the face of any large project, the act of breaking things up into smaller,

more manageable pieces, makes the to-do list a bit more manageable. Known as content chunking, practitioners of SCALE-UP have seen evidence that smaller education segments result in increased student education and learning that values depth rather than breadth.

While this can indeed be applied to any project, content chunking may also be found in mini-lectures, activity durations, reading times, and class discussion period, to name a few instances.

Flipped Learning

For the bulk of educational history, the standard lesson model was simple - listen to a lecture, take notes, complete homework, and study. Boldly, SCALE-UP has done away with this tired way of doing things and has flipped lessons on their heads.

Known as flipped learning, this aspect of SCALE-UP moves the content delivery portion of a class to an outside-the-classroom expectation, while study and application-based activities and discussions are brought in-class and take up the bulk of class time. Flipped learning, indeed.

Student Centrism

More than anything else, SCALE-UP is defined by its student-centered focus. Lessons, assignments, and group compositions are not simply cookie-cutter, one-size-fits-all arrangements that professors can utilize on repeat, semester after semester.

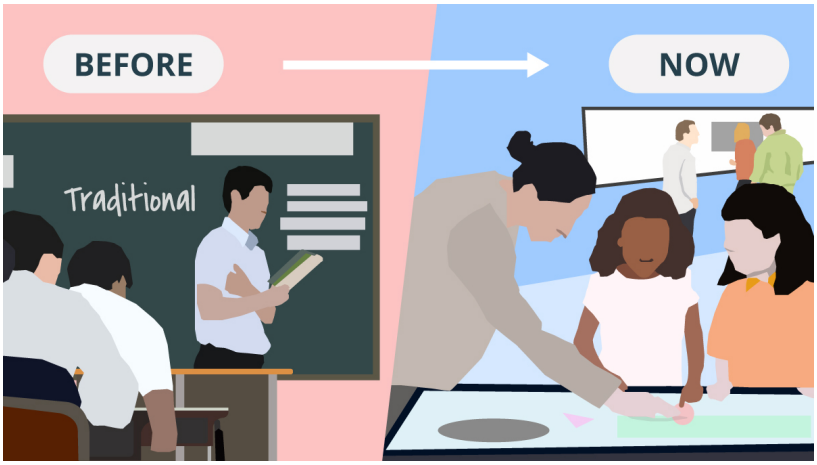
What that kind of classroom may certainly be found in other environments, they are simply incompatible with SCALE-UP. When devising a lesson and dividing groups, professors will take each student's educational history, background, and demographic into serious consideration.

As a result, SCALE-UP is accommodating towards the needs of each class and student. If a class needs an extra lesson to

grasp a concept, or if a class requires a faster pace, then SCALE-UP's inherent flexibility is ready to be taken advantage of.

The components of SCALE-UP

Although the principles of SCALE-UP speak to the ideas behind its theoretical framework, they don't have much bearing on the practical construction of a SCALE-UP. For that, the actual components behind SCALE-UP are of paramount importance, the specifics of which will now be expanded upon.



Group Formation

Group learning and collaboration are hallmarks of any SCALE-UP classroom in existence. To properly establish a functional implementation of SCALE-UP, effective group formation is key.

To be clear, this is not simply a matter of clumping students together at random, but rather a deliberately chosen confluence of students with clearly defined roles. In that regard, SCALE-UP groups, the existence which is intended to be temporary, should be made of an equal number of students from different skill levels.

When teams are formed, broken up, and reallocated, the assignment of rules is of immense importance. The teacher can assign these roles his/herself, or the students can decide internally. Of frequent use are roles such as scribe, questioner, organizer, and summarizer.

Proper Activity Design

In addition to content chunking, which refers to the interspersion of mini-lectures with activities and other forms of in-class learning, those endeavoring to design an activity consistent with SCALE-UP must consider its relevant tenets, particularly within the context of inquiry-based learning - tangibles, pondurables, and visibles.

In order, these aspects are in reference to hands-on observations, interesting problems, teachable images, respectively. In the case of visibles, beyond simple images, they can refer to simulations, demonstrations, and other explorable visuals. When performed correctly, a proper SCALE-UP group activity uses all three tenets in equal measure - role-plays, simulations, brainstorms, and so on.

Feedback

Since SCALE-UP enables in-class inquiry, students are encouraged to gather information, determine strategies, analyze results, and learn from the experience at the end. In the case of the latter, students are meant to both self-determine what worked and what didn't and receive feedback from the class at large.

Live feedback, both from the professor as well as from peers, is essential to the effective implementation of SCALE-UP. Not only will the students' output improve with each successive round of feedback, but so too will the success of SCALE-UP as a whole be greater.

Support

As is central to SCALE-UP classrooms everywhere, the standard, one-way teacher-student paradigm is done away with in favor of a structure that is a bit more dynamic. With an emphasis on depth over breadth, teachers are meant to foster question- and discussion-based learning, as opposed to covering as much material as quickly as possible.

To do so, SCALE-UP promotes a supportive classroom environment, which here possesses more than one meaning, beyond that of the aforementioned inquiry-centric teaching prerogative. The first involves a supportive learning structure, in that concepts, activities, and broad understanding all build on top of one another, similar to scaffolding one may see adjacent to a building.

Moreover, SCALE-UP support also refers to the student-student relationship, which is made more prominent by way of SCALE-UP's focus on student groups. Therein, students within the same group are intended to support one another, not only in the completion of classwork, but also to teach one another when confusion arises.

Effective Assessment

As much as students may loathe it, assessments are an essential part of the education process. It helps teachers to gain a sense of whether their teaching style, activities, and concepts are connecting with students in a successful manner.

However, assessment simply for the sake of it is indeed a useless endeavor. For assessment to properly yield actionable information, it must be generated from the basis of proper planning and thought. This is a facet of SCALE-UP that could be of universal benefit.

From the outset, teaching engaging in SCALE-UP practices should conceive of their curriculum's in a backward manner. That means that the course's education outcomes, and therefore, the content of the eventual assessment, should be decided upon from the beginning. In an actionable context,

all activities, classroom experiences, and projected outcomes should be aligned with the content of the assessment, so as to properly measure and value the results.

How does SCALE-UP differ from traditional classrooms?

If it was not already evident, SCALE-UP classrooms differ widely from their traditional counterparts. The approach by SCALE-UP towards student engagement, teacher preparation, and teacher-peer relationships are notable examples of this.

Active vs Passive Engagement

In a traditional classroom, where note-taking and test-taking are the two primary student responsibilities, active engagement is not widely encouraged. Since those students are practicing passive engagement, their roles can be summed up as listener, note taker, and general observer.

In SCALE-UP classrooms, on the other hand, the inherent group work and discussion requirement acts as a catalyst for otherwise passive students to take part in active

engagement. Therefore, the role of an actively engaged student in a SCALE-UP setting is that of an active problem solver, contributor, and discussant.

Level of preparation

Although the level of preparation is often dictated by the specific class, teacher, and topic, it goes without saying that the level of necessary preparation in a SCALE-UP classroom is significantly greater than that of a traditional classroom. This is primarily due to the rigors of a discussion-based environment. It's much easier to skate by without preparation when a traditional class period solely entails note-taking, as opposed to SCALE-UP's more involved expectations.

Relationship with peers

In SCALE-UP classrooms, classmates are no longer just the unnamed persons sitting around you, as is the case in traditional classrooms. In the case of SCALE-UP, on the other hand, your classmates and your relationship with them is integral to both the learning success and your success therein. This is true in the context of not only group work, but also attendance, responsibilities, and sources of information and leadership.

Case in point, in traditional classrooms, classmates are encouraged to compete between one another for a limited number of high scores, particularly if there is a curve present. In SCALE-UP, the relationship is 100% collaborative. The same goes for responsibilities, which is determined within the context of a group setting, and therefore affects one’s willingness to be absent or tardy. This also holds true for information sources and leadership, since SCALE-UP classrooms diffuse the professor-centric focal point and encourage students to rely on one another in equal measure.

SCALE-UP in Practice

Although SCALE-UP has been implemented in over 500 educational settings around the world, it originated at North Carolina State University in 2006 as an experimental educational model for physics classes that blurred the lines between lectures and labs. At the conclusion of the initial study, researchers found that SCALE-UP yielded the following benefits:

- **Higher grades**
- **Improved attendance rates**
- **Better student attitude and engagement**
- **Positive development of problem-solving skills**
- **Greater overall understanding**

Since then, and with these benefits in-hand, SCALE-UP has obviously grown and evolved beyond its limited original view. It has now been applied to a variety of disciplines, particularly with an eye toward meaningful and effective technology integration in the classroom. As result, educational technological offerings have evolved to meet the growing demand by classrooms and institutions from across the globe.

As part of this trend, ViewSonic has proved itself as being more than up to the challenge. With its ViewBoard, ViewBoard S, and myViewBoard product lines, the facilitation of class discussion and group collaboration, both in-person and online, has never been easier. For those classrooms embracing the modern dynamic pedagogies associated with SCALE-UP, these products are absolutely worth looking into.