

AlgoBlock

Hideyuki Suzuki and Hiroshi Kato (1993)

AlgoBlock is designed to facilitate collaborative, socially situated, and meaningful (authentic) learning. They write that “learning is a process of enculturation through social interactions.” The authors envision programming languages as “conversational artifacts” that scaffold “interactions among learners.”



The primary point of departure from traditional languages—e.g. Logo—is reimagining the screen based user interface, which affords interaction only by a few viewers, with a tangible block interface. The program controls the behavior of an agent, an underwater submarine, in a simulated microworld. Program blocks represent Logo inspired movement commands and control structures. Some blocks have physical switches on them for parameter control.

Ease of use facilitates immersion in group activity rather than the tool itself. Furthermore, it “promotes trail-and-error,” which stimulates interaction. Tangibility affords “simultaneous accessing” and “mutual monitoring”—everyone can observe and interact with the shared representation and activity. Tangibility also encourages learners to engage in natural turn taking behavior. Tangibility enables a repertoire of actions and coordinating gestures from the physical world to come into play: reaching out, pointing, looking at, turning towards, holding, etc...

