EAIE

Esports as Accelerator for Social Inclusive Education

LESSON

THE BEZIER GAME

AUTHOR

SERGIO ELVIRA PEREZ

CODEARTS SOLUTIONS

THE BEZIER GAME

The Bezier Game develops precision with the Pen Tool and Bezier curves through a sequence of interactive visual challenges. Learners work with anchor points and control handles, aiming to reproduce curves accurately while using as few points as possible and then transferring the same techniques to professional design software.

Subject and level

VET learners in digital design, multimedia production or related creative programmes. The activity is particularly suitable for students developing vector drawing skills for interface design, illustration, 3D workflows and visual communication.

Connection to curriculum

The exercise connects vector drawing theory with practical design production. It reinforces Pen Tool control, spatial reasoning, visual accuracy and efficient construction of paths, while preparing learners to apply the same principles in Photoshop and other professional design environments.

Didactic and pedagogic considerations

The activity follows a constructivist, hands-on approach. Students learn through immediate visual feedback, repeated attempts and comparison of alternative solutions. Peer discussion and teacher demonstrations help them understand why fewer, well-positioned anchor points often produce cleaner and more editable curves.

Time estimate

2 hours

THE BEZIER GAME

Group size

20-30 students

Overall introduction to exercise

Students use the online Bezier Game to practise curve construction before applying the same principles in Photoshop. The challenge moves from guided manipulation to increasingly independent work, allowing learners to see the direct relationship between control handles, anchor-point placement and the final shape.

The activity combines technical accuracy with strategic thinking. Success is not simply completing a shape, but doing so efficiently and being able to explain why a particular path structure is easier to control. This prepares students for more complex vector and digital design tasks.

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Exercise as presented to the students

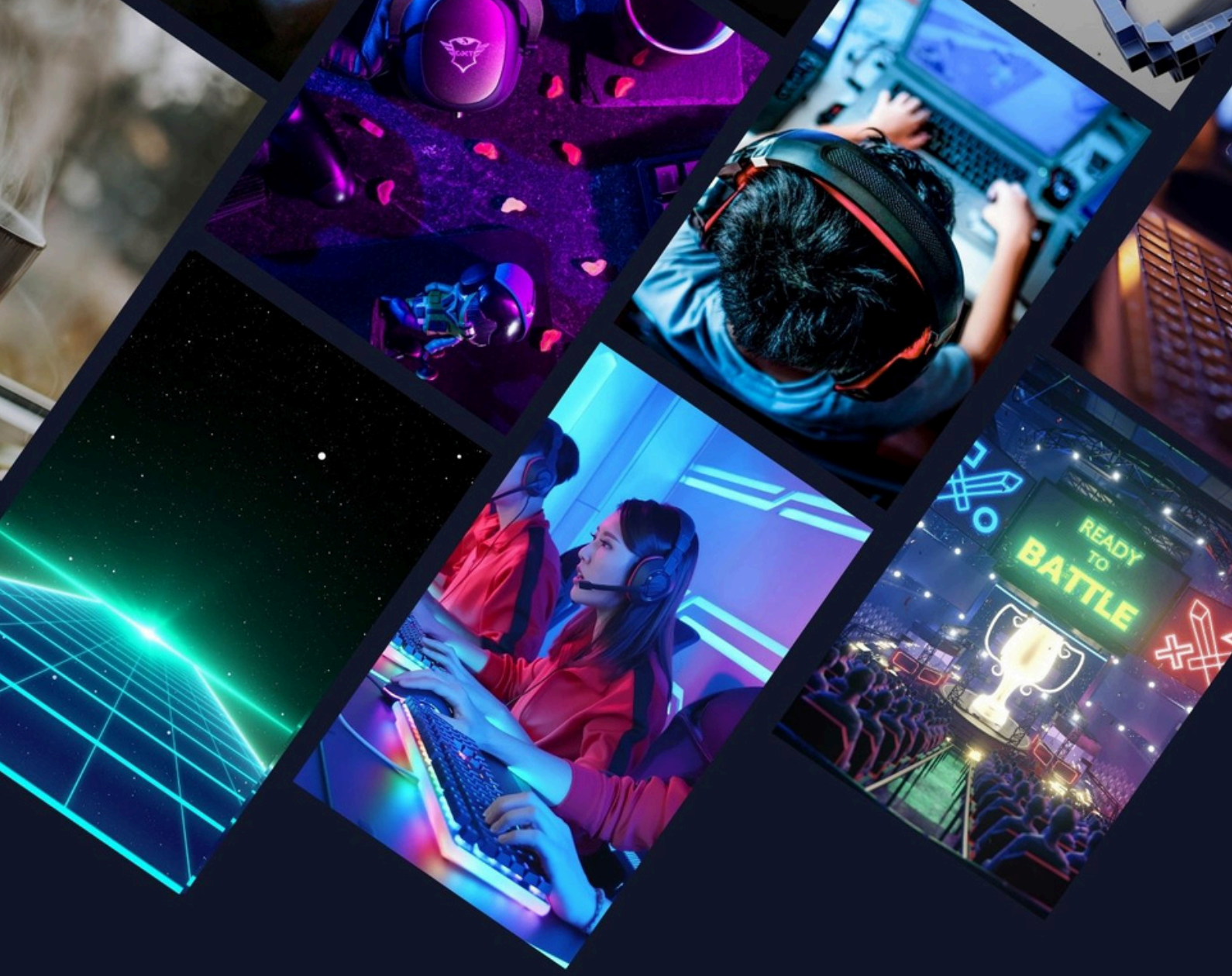
The session starts with a short explanation of how Bezier curves are constructed from anchor points and direction handles. The teacher demonstrates one simple curve on the classroom screen and then opens bezier.method.ac so that students can see how the same principle is turned into an interactive challenge. The class is asked to focus first on accuracy rather than speed.

Students then work individually through the first set of levels. After each attempt, they compare the number and position of their control points with the reference solution. When a curve is inaccurate, they are encouraged to adjust existing handles before adding a new anchor point. This makes efficiency a visible part of the task rather than an abstract design rule.

Once the basic levels are completed, students work in pairs for a short peer-coaching phase. One learner completes a challenge while the other observes and suggests where a handle could be moved or an unnecessary point removed. They then swap roles. The teacher circulates between pairs, asking students to justify their decisions and correcting misconceptions about curve direction and handle length.

The second part transfers the learning into Photoshop. Students receive a simple reference image containing curved contours and recreate one selected shape with the Pen Tool. They are asked to use the same economy of anchor points practised in the game and to compare a first attempt with an improved version after peer feedback.

The session ends with a short gallery review. Students show one curve they found difficult, explain what they changed, and identify one technique they would reuse in future design work. The final artefacts and classroom observations provide evidence of improved precision, more efficient use of anchor points and greater confidence with vector-based tools.



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