

Creating a Meta-Skills Learning Ecosystem for Scotland's Future Learners

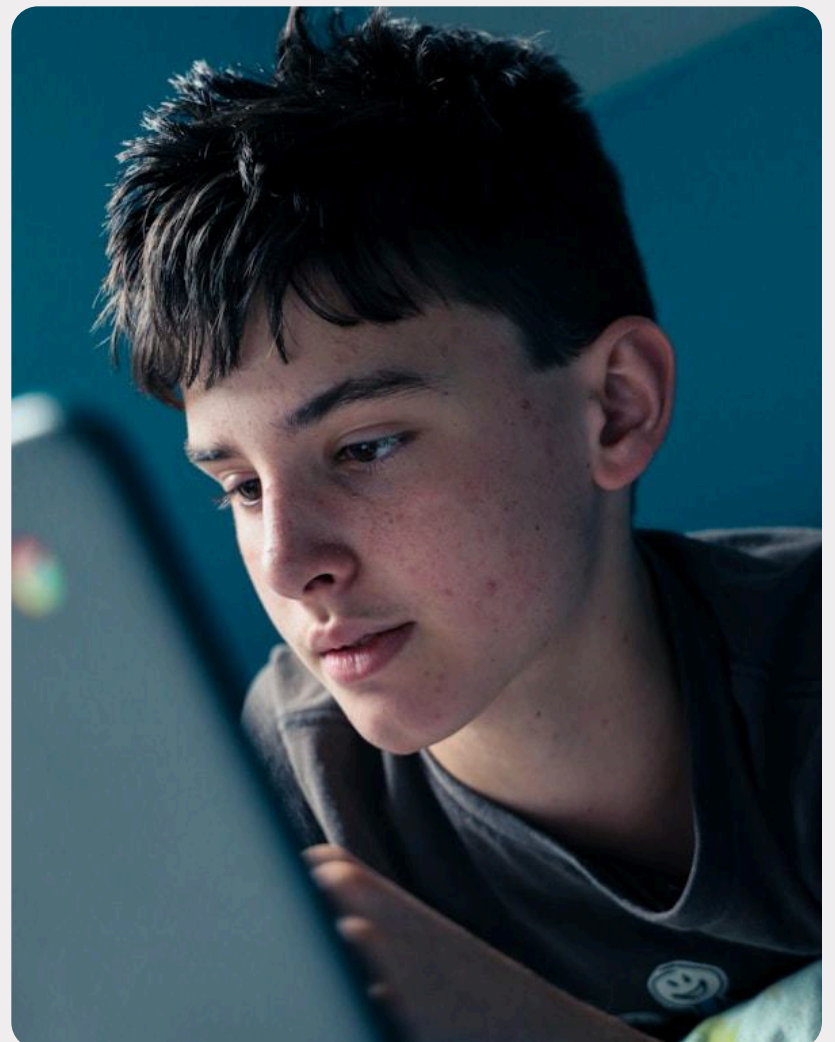
Background

Gen+ is a Scotland-based organization focused on equipping young people aged 9 to 14 with essential meta-skills such as resilience, collaboration, and critical thinking. Launched in 2021 and funded by the Peter Vardy Foundation, Gen+ partners with local authorities, schools, and social sector organizations to deliver a unique learning program. Their vision is to build meta-skills capacity for every pupil and teacher across Scotland through an innovative and scalable education model.

Challenges

To realize their vision, Gen+ needed more than just a standard learning platform. They required a highly customized solution that could integrate with national systems, cater to young learners, and offer real-time insights for educators and administrators. Key challenges included:

- **Platform Development for Blended Learning:** Gen+ sought to develop a custom learning platform using Open edX to support a blended learning model for school-aged children and their teachers.
- **Glow SSO Integration:** Required seamless integration with Scotland's centralized academic system (Glow) for user authentication and class synchronization.
- **Student-Centered UX:** Needed a gamified, visually engaging platform tailored for young learners, demanding significant instructional design expertise.
- **Data Synchronization & Management:** Required scalable data handling, with real-time updates and structured user management.
- **Dashboards and Analytics:** Needed interactive dashboards for teachers and administrators to track student progress and skill development.
- **Content Management for Educators:** A centralized CMS was needed for managing micro-learning content, blogs, and videos.

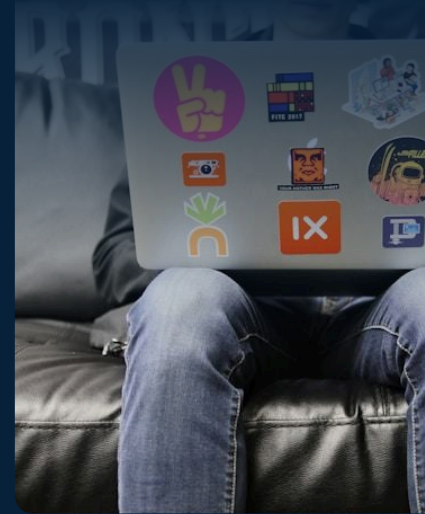


Solutions

Edly collaborated closely with Gen+ to design and develop a comprehensive Open edX-based solution that addressed both their technical and pedagogical requirements. The result was a scalable platform tailored for high engagement and deep learning.

Key elements of the solution included:

- **Custom Open edX Instance:** Edly tailored a recent Open edX release, integrating it with Glow SSO and developing an extended frontend in React.
- **Gamified User Interface:** Designed a highly visual, engaging UI with 3D avatars and vibrant color palettes, inspired by popular video games, to boost student engagement.
- **Micro-Learning for Teachers:** Created a dedicated content library to support teacher development in meta-skills education.
- **Interactive Dashboards:** Built using React and Material-UI, the dashboards visualize learner progress, skill assessments, and journal reflections.
- **Journal and Skill Tracking:** Enabled journaling features and customizable assessment scales, allowing teachers to monitor reflective learning and student growth.
- **Custom CMS (Gen+ Teach):** Developed a teacher-facing CMS to manage multimedia learning content, including blogs, articles, and videos.
- **Backend Infrastructure:** Designed a scalable backend with hierarchical course structures and auto-enrollment mechanisms for district-wide deployment.



Impact

The platform was successfully launched in January 2023 after a seven-month development cycle.

- Rolled out across 11 schools, engaging over 5,000 students and 900 teachers.
- Teachers gained access to a comprehensive micro-learning library, supporting continuous professional development in meta-skills.
- Actionable dashboards and skill-based analytics helped personalize learning paths for students.
- Gen+ is set to expand to 40 schools in the next academic cycle, aiming for nationwide coverage.

Technology

- **Frontend:** React, Material-UI (MUI)
- **Backend:** Django, Python, MySQL, Redis, Celery
- **Integrations:** Glow SSO, REST APIs
- **Infrastructure:** AWS, Webpack

Organizations Involved

This project was made possible through a close collaboration between gen+ and Edly.

