Additive Manufacturing

Section three
UK Insights

What are the UK's strengths in this skill?

Students are naturally good at using IT. It's possible to utilise this and introduce Computer Aided Engineering software solutions to them early. When given the opportunity and provided with suitable challenges they respond well.

Some may have used 3D Printers earlier in their education or at home, it's possible to build on experiences and push them further.

What are the UK's areas for development?

- Additive Manufacturing is not delivered as a mainstream qualification. It is usually delivered as part of a module or unit. Having a stronger focus or delivery would enhance exposure and improve skills.

- Being able to reverse engineer from scanned data. More practice or examples should be used in education.

- More focus may be required on design for functionality, e.g. changing infill densities, being able to understand the different materials and their applications.

What are the key skills that UK Educators need to develop in their students in readiness for competitions / industry / employment?

National Competitions	Employment / Industry
Autodesk Fusion 360 familiarisation – Competitor software skills need to be very good.	Coming up with design solutions quickly.
Increase exposure to 3D printing technologies.	- Being adaptable to the needs of the brief, showing flexibility.
Work from physical items instead of from drawings. Top-Down Design approach.	- Being able to optimise CAE software effectively.

Final Thoughts

Entering students into an Additive Manufacturing competition will not only benefit the students involved but also the educators. WorldSkills UK National competitions happen annually and is a great tool to improve standards but also acknowledge the great work being done by UK Educators.

Additive Manufacturing is a new skill to the competition portfolio, and it brings a large amount of excitement with its potential.

Additive Manufacturing applies to more industries than people realise, and it can be a fantastic springboard for students to progress and be successful.

Autodesk Fusion is free to students and educators, with the possibility of training for educators on the software.