Summary Report: Skills Gap Pilot Programme October – May 2014

Overview

The Skills Gap Programme has been developed by the Design and Technology Association as part of its commitment to support Design & Technology teachers to keep pace with technological developments and deliver a curriculum fit for the 21st century.

Through a structured programme, the Skills Gap (SG) team guides and supports the school and business partner in working together, over a period of approximately six months, to create and deliver a unique skills-based school project with students, related specifically to the teachers' skills gaps and the technical expertise of the partner business.   During project delivery, the SG team works with the school to develop business-linked teaching materials which are tailored to be suitable and accessible for sharing with a wider audience of teachers.

Pilot Results

The initial pilot programme launched in October 2013, was completed in May 2014, by two school and business partnerships comprising:

1. ACE Academy and Alucast, West Midlands

ACE Academy teachers' skills development focused on manufacturing in quantity, quality control procedures and iterative design process. Working with Alucast, the school developed a project, delivered to Y9 pupils, to design and cast a candle-holder with placemats as a table centerpiece, using aluminium and other metals in school. The project also aimed to develop students' skills in problem-solving, independent enquiry and self-management.
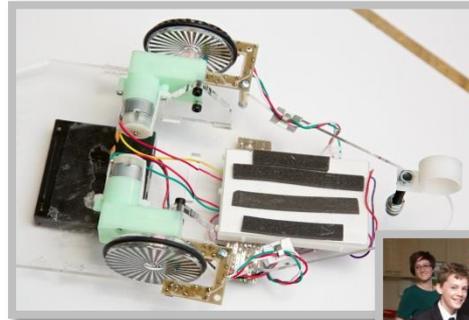
Outcomes:

Lead teacher reported:	▪ high level of knowledge and skill in the key focus areas through delivering the project ▪ increased skills in creative lesson planning linked to curriculum & business needs; giving careers advice ▪ benefits including developing new skills and renewed enthusiasm to create new projects	*"It was good to develop a relationship with business and they were very supportive - brilliant."*
Pupils' surveys showed:	▪ 75% found project interesting ▪ 80% have used new skills ▪ 80% enjoyed working with business ▪ 80% enjoy studying D&T	*"I have really enjoyed this topic."*
Business coaches reported:	▪ learning new skills in both coaching and working with young people ▪ increased understanding of how D&T is taught in schools ▪ developing connection with the local school	*"Really enjoyed working with the pupils and especially their visit to the factory"*

Note: 1 D&T teacher led the project; 20 pupils were surveyed; 4 business coaches provided feedback.

## 2.	Marling School and Renishaw

Marling school's teachers' skills development focused on computer programming, advanced electrical & electronic systems, using intelligence in products.

Working with Renishaw, the school project, delivered to Y8 pupils, was to design and make a robot 'buggy' that could be programmed for controlled movement. The project also aimed to develop students' skills in self-management, determination, creativity and risk-taking.

Outcomes:

Teachers reported:	▪ new knowledge and skills, particularly related to computer-programming ▪ increased skills in creative lesson planning linked to curriculum & business needs; giving careers advice ▪ benefits including increased confidence; career progression opportunities; working as a team and with external people; learning from both colleagues and pupils; greater D&T profile in school	*"Brilliant programme and support element is very important."*
Pupils' surveys showed:	▪ 86% found project interesting ▪ 90% have used new skills ▪ 81% enjoyed working with business ▪ 71% enjoy studying D&T	*"I really enjoyed the project: because of it I might look at going into DT later on."*
Business coaches reported:	▪ learning new skills in both coaching and working with young people ▪ significantly increased understanding of D&T ▪ developing some additional skills themselves in buggy building and programming	*"..enjoyed opportunity to work on a different project and to see children get excited about engineering.''*

Note: 4 D&T staff participated; 42 pupils were surveyed; 3 business coaches provided feedback.

Observations

The initial Skills Gap pilot has been very successful whilst providing opportunities to improve programme delivery for greater efficiency and ongoing success. Lessons learned have included:

Challenges	Solutions
➢ Ensuring project is teacher-led and manageable from both school and business aspect	Modify process for earlier school project planning; involve SG team at all stages
➢ Completing project within school time limitations *(e.g. carousel delivery model; exams etc.)*	Clarify school's commitments at initial' healthcheck'; plan projects accordingly for the academic year
➢ Ensuring students can achieve a satisfactory end-product within the timeframe	Review project plans to ensure creative but simple, with extension work opportunities for able pupils

Further programme development is underway including the production and testing of teaching resources from the pilot; creating a website; establishing further business/school partnerships and projects; exploring opportunities for broader programme expansion and reach.

For further information about the programme or to register your interest in the scheme, please contact:
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