

An Evaluation of the 2012 Design Ventura Programme
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Contents

1: Introduction	4
Background	4
Aims and objectives	5
Description of the programme	7
Concepts.....	7
2: Methodology	9
Responsibilities	9
Data collection.....	9
3: Results.....	11
Student survey profile.....	11
Teacher profile	12
Activities at the Design Museum	12
Teaching and learning with Design Ventura	13
Improving enterprise and creativity skills.....	16
Interest in creative and business related skills	17
Increasing confidence and ambition amongst young people.....	17
Teachers' perceived impact on student skill levels.....	19
Achieving ambitions	24
Increasing understanding of business within the design industry	26
Building sustainability	26
Providing a learning experience of the highest quality	27
Outcomes for teachers	28
4: Conclusions	35
Impact	35
Virtual Design Ventura	36
Sustainability	37
5: Recommendations	39
Appendix 1	41

1: Introduction

Background

Design Ventura is a three year enterprise and design education programme that is being managed by the Design Museum with the sponsorship of Deutsche Bank. The programme focuses on the development of enterprise capability in the context of design. The programme aims to:

- 'Increase the skills and confidence of learners through multiple engagements with a range of inspiring role models and design experts.
- Raise the motivation of learners and raise aspirations by enabling them to discover their creative entrepreneurial talent.
- Fire a passion for design amongst young people, and connect this to practical next steps that relate to achievement in future careers and education.
- Build lasting relationships with teachers and schools
- Identify new pedagogic approaches to enterprise education within a museum context that will support the development of Learning at the Design Museum in the longer term.'

(Design Museum 6 monthly Report to Deutsche Bank, 2011)

The programme aims to place design skills in a real-world context, developing student creativity and enterprise capabilities. The programme gives young people aged 14-16 the opportunity tackle a brief, set in collaboration with eminent fashion designer Anya Hindmarch. Design Ventura aims to give young people a taste of life within the design industry, and to empower them to explore ideas from both creative and business perspectives. Throughout the project, museum educators, practising designers and people from the world of business have provided support, role models and advice for students and their teachers.

As a museum education project, Design Ventura is unusual because of its large scale and long duration and the way that it combines outreach and museum based learning. Another innovative feature is the provision of information and resources on line along with support for on-line networking for participants. The programme started in Easter 2010 and ran for three years. It was planned that the programme will engage 30-40 secondary schools and 600-800 students per annum.

In 2010, the evaluation explored the broad impact of the Design Ventura and measured the general satisfaction of participants. Qualitative evaluation revealed in some detail how teachers and learners were responding to different elements of the programme. In the second year, improved design and administration of the surveys led to better data which permitted a more thorough and reliable evaluation. In this third year, we have sought to test

earlier findings and to probe further to try to explain how Design Ventura brings about the impact that has been evidenced.

Aims and objectives

The aims of the Design Ventura programme have been expressed in terms of the specific learning outcomes and targets for students. These are set out in Table 1. Targets for the project are shown in Appendix 1.

The evaluation has gathered evidence which enables informed judgements about the degree to which the programme has fulfilled these aims and achieved these targets.

For the purpose of this report, impact of the programme is expressed in terms of:

- Improved enterprise and creativity skills
- Increased confidence and ambition
- Increased understanding of business within the design industry,
- Legacy – sustainability through training for teachers/volunteers, partnerships and online resources
- Provision of a learning experience of the highest quality, according to participant enjoyment and satisfaction ratings of the programme.

Table 1: Learning outcomes and targets for participating students

Impact Measurement Area	Aim	Outcome Indicators	Anticipated outcomes
1. Skills	To improve enterprise and creativity skills amongst young people	<ul style="list-style-type: none"> -Increased creativity -Improved business and economic understanding (inc. financial capability) -Increased teamwork skills -Increased leadership skills -Improved decision-making skills -Improved ability to assess/manage risk 	<ul style="list-style-type: none"> • 60% young people experience an increase in enterprise skills and creativity.
2. Attitudes/Attributes	To increase confidence and ambition amongst young people	<ul style="list-style-type: none"> -Increased self-confidence. -Increased ability to handle uncertainty -Raised career and education aspirations -Reduction of perceived barriers to success/achievement 	<ul style="list-style-type: none"> • 70% of young people experience an increase in confidence and ambition. • 50% of young people perceive a reduction of barriers to success/achievement.
3. Knowledge and understanding	To increase understanding of business within the design industry	<ul style="list-style-type: none"> -More business and design professionals actively involved in design-enterprise education -Number of applications to trade at Ventura Pitching Events. 	<ul style="list-style-type: none"> • 60% of young people experience an increase in economic and business understanding. • 60% of participating schools submit applications to trade in Ventura Pitching Event
4. Legacy	To build sustainability through training for teachers/volunteers, partnerships and online resources.	<ul style="list-style-type: none"> -Increase of schools participating during for more than 1 year of the programme -Take up of Virtual Ventura and Ventura Awards following CPD 	<ul style="list-style-type: none"> • 50% of schools participate in the Ventura programme more than once. • 100 schools participate in the Virtual Ventura over three years.
5. Qualitative Experience	To provide a learning experience of the highest quality.	<ul style="list-style-type: none"> -Levels of enjoyment amongst all participants -Perceived efficacy of the project in achieving its stated aims -General feedback – comments, quotes etc. gathered from all participants. 	<ul style="list-style-type: none"> • 85% of participants rate their experience of the project as 'good'. • 85% of participants agree that the project achieved its stated aims. • Range of positive feedback collected from cross section of participants.

Description of the programme

Schools were recruited through mail outs and hand outs at the Design Museum. 39 schools were recruited to Design Ventura in 2012 (32 in 2011, 30 in 2010) and 76 in Virtual Design Ventura (56 in 2011). 10 Deutsche Bank priority schools participated (13 in 2011).

A full day of CPD for teachers was held with 24 teachers attending. Training was provided for the staff delivering the planned workshops along with briefing sessions for 35 designers and Deutsche Bank volunteers. 35 teachers attended CPD day for those who wanted their schools to participate in Virtual Ventura and a further 14 teachers attended a twilight CPD session.

Learning content for the programme had been developed during earlier years. However, the design of all of the sessions (introduction at the museum, hothouse and pitching session) was reviewed and revised. New guidance was produced for schools. In addition new materials were added to the website. In particular, an introductory briefing video permitted learners to be briefed on their task, without attendance at the museum. Further additional web-materials included: images of successful projects from previous years, top tips sheets, worksheets and videos of designers and business people giving advice.

Virtual Ventura had a dedicated set of web-pages with enhanced set of virtual resources along with advice about how to participate in the competition virtually. A web-chat session was offered to students to discuss their work during the course of the competition. 10 Virtual Ventura schools made their own self-directed visits to the museum.

During the first half of the autumn term, 39 launch workshops were held at the Design Museum, which included participation from business volunteers. There followed 39 'hothouse' sessions in school with a business focus and 39 'hothouse' sessions in schools with a design focus.

82% of schools submitted their entries to the Design Museum in mid-November and 10 teams of finalists were invited to present their designs at a pitching day at the Design Museum in December 2012. The winning school was announced in February 2013.

Concepts

Enterprise and design

Design education and enterprise education are viewed as two distinct curriculum areas in English secondary schools. Over the years, there have been a number of 'enrichment programmes' offered by outside agencies which serve to support or promote either design education or enterprise

education¹. This project sought to address both curriculum areas together by identifying a set of learning outcomes that were complementary or common. It created a learning programme, learning activities and resources that exhibit a distinctive way of teaching design-enterprise as well as targeting a set of knowledge, skills and attitudes which are used together when design is applied to solve real problems in a commercial environment. As such it represents an experiment in curriculum design as well as a being an enterprise competition and a way of encouraging design in English schools.

The museum as educator

Since at least the eighties, many agencies and industries have sought to enrich the curriculum by brokering visits, exchanges or collaboration. These activities aim to enhance and supplement the work of schools, by providing inspiration and support directly from the 'real world'. With Design Ventura, the Design Museum has taken on the role of a broker between schools, on the one hand, and the worlds of design and business on the other. In evaluating this project we should consider not only the impacts which have been achieved, but how this museum has acted as an educational entrepreneur to successfully broker links and communication.

Modes of teaching and learning

Design Ventura is a programme that supplements the teaching and learning that is going on in schools with additional modes of teaching and learning. In particular, it offers learning through: object-handling, direct contact with professionals, learning in a museum, role play, project work and real tasks set by a client. It is of interest to try to understand how these different methods combine to produce impact.

Design Ventura and schools

Design Ventura can only have impact if it is taken up by schools. It follows that its impact depends on the way that it is perceived and used by schools and the way in which it fits with other objectives as defined by individual schools and the national curriculum. Recruitment of schools in 2012-13 was on target despite the fact that the Olympics generated alternative activities for schools. However, schools did not always take up the opportunities offered, for example, 6 of the 46 launch workshops booked by schools were not, in the end, attended. Further the way in which Design Ventura was used varied between schools.

¹ For example, projects offered by Young Enterprise or from the Royal Academy of Engineering

2: Methodology

The evaluation of Design Ventura has employed a mixed-method approach, utilising a combination of questionnaires, case studies, workshop observations and interviews with teachers and students.

Details of the precise methods used for the 2010 and 2011 programmes have been documented in the corresponding annual evaluation reports. The current report provides a summary of the former and a more detailed account of the methodology employed for the evaluation of the third and final year of the Design Ventura programme in 2012/13.

Responsibilities

In order to take advantage of different skills, costs, access factors and independence the evaluation tasks have been shared. The Design Museum recorded participation in the programme and administered the evaluation surveys. The Centre for Education and Industry at the University of Warwick (CEI) was responsible for survey design, analysis and reporting.

Data collection

Data have been collected from questionnaires, observations and interviews administered during the project to identify student and teacher reactions to the delivered programme and to identify progress in relation to the specific targets that were set for Design Ventura.

Administrative data

The Design Museum has collected data relating to the characteristics of participating schools from the registration forms and details of activities they engaged in. Additional demographic details have been gathered from Ofsted information.

Survey Questionnaires

Online and face to face surveys of teachers and students were administered as follows:

- Survey of teachers, pre programme - Design Ventura (Wave 1)
- Survey of teachers, post programme - Design Ventura (Wave 2)
- Survey of students, post programme - Design Ventura
- Survey of teachers, post programme - Virtual Design Ventura

To encourage response rates and to optimise participation, the Design Museum managed survey distribution and returned completed questionnaires to CEI for manual data entry.

The student survey was administered by school teachers, either at the Design Museum or at the school.

Observation

Two introductory sessions at the Design Museum, involving two different schools, were observed in September at the start of the programme. Two 'hothouse' sessions at two different schools were observed in October: one with a focus on design and the other with a focus on business. In addition, the Pitching Session for those teams whose designs were short-listed for the competition was observed.

Interviews

In this final year, interviews were carried out with teachers and students at the two schools visited and also with representatives from two schools during the course of the introductory session at the Design Museum and with those attending the Pitching Session for those teams whose designs were short-listed. In addition, there were brief interviews with one business contributor, one design contributor and one museum educator.

3: Results

The 2012/13 Design Ventura and Virtual Ventura programmes together have reached 115 London Schools and 5,367 Students. In total 39 schools participated in the final 2012 Design Ventura programme and 76 participated in the Virtual Ventura programme.

Student survey profile

1,457 students participated in the 2012/13 Design Ventura programme and 3,910 students participated in Virtual Ventura.

The student survey received 541 returns from Design Ventura students (compared to 499 in year 2011 and 146 in year 2010), with this year's cohort coming from 29 different schools. Consequently, the survey this year has achieved a 37% response.

The profile of students according to survey responses is summarised below, details of which are presented in Table 2. Virtual Ventura students were not surveyed.

Gender

The survey data for 2012/13 indicates that females outnumber males by almost 3 to 1. The gender balance in 2011 was fairly even, however in 2010 the reverse was true where males outnumbered females by 3 to 1.

Ethnicity

A third of the students surveyed this year described themselves as white (33%). The ethnic profile of participating students is very similar to that reported in previous years.

Year group

Half of the students surveyed were in Years 8/9 and half were in were in year 10/11. Previously, the survey data showed that in 2011 just over a third of students were in Year 9 and just over a half were in year 10 and in 2010 just over a quarter were in year 9 and just over two thirds were in year 10.

Table 2: Student survey profile: % (2010 and 2011 results shown respectively in parentheses for comparison)

Gender	Male 30% (46%/74%)	Female 70% (53%/27%)	
Year group	Year 8/9 – 50% (35%/27%)	Year 10 – 49% (58%/67%)	Year 11 – 1% (5%/5%)
Ethnicity	White – 34%	Mixed – 11%	Asian or Asian British – 25%
	Black or Black British – 21%	Chinese – 3%	Not disclosed – 7%

As in previous years, teachers reported that student participants were involved in a variety of GCSE subjects. For example, this year saw participation from students in the following subjects:

- GCSE Design and Technology – Product Design (students from 25 schools)
- GCSE Design and Technology – Graphics/Design (students from 12 schools)
- GCSE Design and Technology – Resistant Materials (students from 13 schools)
- GCSE Art and Design/Applied Art and Design (students from 4 schools)
- GCSE Design and Technology – Textiles (students from 6 schools)
- Key Stage 3 Design/Technology (students from 15 schools)
- GCSE Business Studies/Applied Business Studies (students from 3 schools)
- Creative and Media Diploma (students from 1 school).

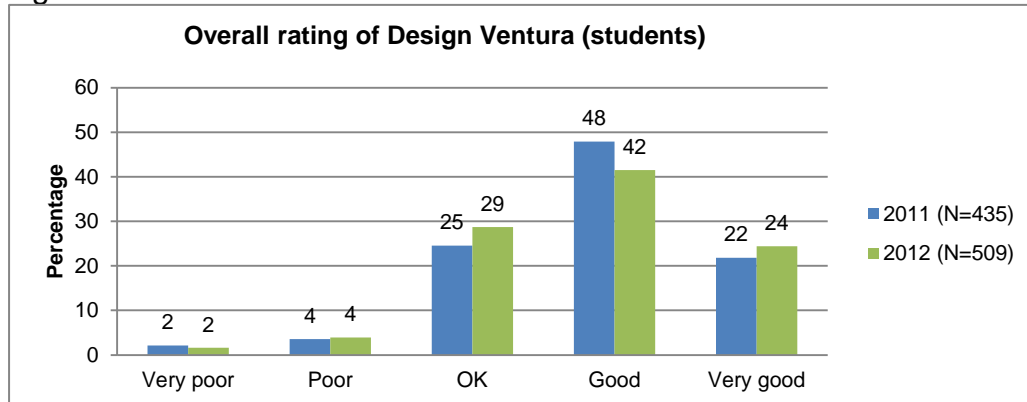
Teacher profile

42 teacher responses were received for Wave 1 (compared to 30 in year 2 and 40 in year 1); 35 were received for Wave 2 (compared to 21 in year 2 and 10 in year 1). In addition, this year saw 36 teacher participants in the Virtual Ventura survey (compared to 20 in the previous year).

Activities at the Design Museum

Overall ratings for the Design Museum were positive with two out of every three students rating this as good or very good (Figure 1). There were no discernible differences in student ratings between year groups. Almost a third of the students gave a rating of OK, which suggests that improvements could be made.

Figure 1



Likewise, students enjoyed the individual sessions equally, with very little variation evident between session ratings (see Figure 7, page 27).

Comparisons were made to explore student ratings according to their gender and ethnicity. No significant differences were found.

Teaching and learning with Design Ventura

Hothouse sessions (rename this subtitle)

All of the schools participating in Design Ventura were offered a 'launch' workshop at the Design Museum and two hothouse workshops back in their school. The museum sessions were designed by museum educators and led by facilitators from the Design Museum with inputs from business professionals. The hothouse sessions were also designed by museum educators and led by facilitators. One of the two hothouse workshops featured inputs from a design professional.

The character and volume of other teaching and learning experiences in Design Ventura varied greatly between schools. Some teachers dedicated substantial lesson time to the project, this was typically the case where Design Ventura was adopted as the Year 9 Design curriculum for a term. In other schools, Design Ventura was offered as an extra-curricular activity so that a relatively small number of self-selected students pursued the project independently with a teacher providing support as requested.

Observation of the hothouse and museum sessions revealed that both consisted of a similar range of different kinds of teaching and learning. These can be characterised as:

1. Teacher or expert talk to the whole class
2. Teacher or expert performs question and answer with the whole class
3. Groups of students performing tasks (discussion/design/making) which are defined and structured by teacher or expert

4. Groups of students performing tasks which they have defined and allocated amongst themselves in order to fulfil the general brief that has been set
5. Teachers or experts providing guidance or feedback or encouragement to groups of learners
6. Students in groups presenting back to other learners.

Design Ventura teaching and learning experiences were notable for:

- being shaped by a complex and authentic challenge
- the focus upon particular products and designs
- the character and extent of the contribution of adults other than teachers
- the extent of group work.

Challenge

Teaching and learning in Design Ventura was not shaped by a subject curriculum but by an authentic and complex challenge: to conceive, design, prototype, cost, market and present a product for a particular sales outlet. In consequence, learners found that different kinds of learning were more often connected than separated. Rather than learning separately about marketing, communication and materials – at different times, in different places with different teachers – these kinds of learning were joined. Students were expected to have discussions, make decisions and carry out tasks which were ‘inter-disciplinary’ and non-linear.

This kind of learning was perceived by many learners as stimulating and worthwhile: it was clear what use knowledge and skills were being put to. On the other hand, less confident learners were at times challenged and found it hard to know where to start or how to recover from a false start. In consequence, those groups who progressed most rapidly were likely to be those who provided strong self-support or mutual support or those that were provided external support by teachers or facilitators.

Particular products

It was observed that where students were working upon a particular design or product this provided a distinctive focal point for learning. For example, a particular design provided the starting point for considerations about pricing, marketing and environmental issues. This kind of pedagogy was supplemented, sometimes, by an expert/teacher providing generalised rules or principles. However, the transmission of general knowledge and rules did not occupy very much of the learning time.

Starting the learning conversation from a particular product did appear to help some students to understand and participate actively. It was observed that some students became fully engaged in learning in relation to particular

objects and tasks but were not fully engaged when learning consisted of listening to a teacher or expert communicating principles or general rules. This difference in response was particularly prominent for those students whose mastery of English was incomplete.

A product (particularly if physically to hand) provided a shared focal point that facilitated engaging and instructive conversations with different adults: for example, a business person might discuss marketing, a teacher might discuss communication and a designer might relate to a real world project. This observation suggests that design and making activity can provide a nexus for a network of learning conversations between students and with different educators and professionals. This 'boundary crossing' can help learners to synthesise different viewpoints and ideas and transfer their skills from one context to another.

Contribution of professionals and facilitators

It was a characteristic of all of the hothouse and museum sessions that there was a significant contribution to teaching and learning from adults other than teachers. In the museum session, for example, a business professional provided guidance on how to conduct group work and make presentations. The business professional was presented to the learners as a 'business man' and his dress and manner communicated his professional status. The advice provided was authentic, credible and 'just-in-time' as the learners had been tasked to make their own presentation. In consequence the advice was taken on board and acted upon and a simulated learning activity was vested with the aura of a real business presentation. Further, he went from group to group, demonstrating interest in the work of each group and lending a distinctive 'savvy' business perspective.

At a hothouse session at a school, an undergraduate design student presented a number of his designs to Year 9 students. Through his dress, language and Macbook, he presented his vocational identity as an emergent professional, committed to design but still a learner. The student communicated the seriousness and motivation with which he had taken on the briefs set by his college tutors and, by analogy, provided an endorsement of the brief which the Year 9 students had been set. He modelled to them how he and his fellow students tackled similar tasks. Subsequently, he went from group to group, providing individualised guidance and encouragement that were imbued with his status as a young design professional.

Group work

Apart from the contributions of facilitators and experts, most of the learning time took the form of group work. In the museum sessions, group work usually took the form of common tasks defined by the facilitator. In the hothouse sessions, group work sometimes took this form but it also sometimes took the form of tasks set by the group itself and differentiated for different individuals in the group. It was observed that less able students

found the latter mode of working very challenging and their progress was sometimes very slow. This was compensated for by a high level of input from facilitators, teachers and professionals; for example, in one hothouse session there was one adult ‘tutor’ for every two student groups. A challenging mode of learning combined with extensive support did permit the groups to make progress with their own designs and to make sense of their brief. Where students were more able, as for example in a gifted and talent group observed at another school, students were able to work in groups with far less support from adults.

In both schools group work had a number of benefits: it facilitated learning between students within and between groups, it encouraged learners to take responsibility for their own learning, it permitted learners to make learning relevant to their own concerns and it facilitated powerful interactions with adults. On the other hand, some time was ‘wasted’ when groups failed to manage their own learning and work effectively or when they failed to sustain motivation to focus on learning. Where students had the opportunity to do Design Ventura outside of lessons, group work became critical: it was through the group, rather than through the lesson or the teacher, that learning was driven. These groups were important to the learners; indeed, one short-listed group of students reported that this was the third year that the same group had submitted an entry!

Improving enterprise and creativity skills

Participating in the Design Ventura programme has improved students’ business ability and their ability to design (see Table 3a). Their responses were positive overall with the majority indicating that their abilities had increased. Ability to lead others was the only skill not to achieve a majority response; however, still more than one in three students did report gains in this skill as a result of participation in the programme.

As has been reported consistently over the duration of the three year programme, at least two out of every three students report that the greatest gains are in the ‘ability to respond creatively to a design brief’ (70%); ‘ability to understand the business side of design (66%); and ‘ability to communicate design ideas’ (67%).

59% of learners reported an improvement in team working capability though some students found these experiences ‘difficult’. For example, one young person noted:

“Working in groups, it is quite restricting and has caused a few difficult discussions when agreeing on ideas and materials. Although it has been the last thing we have enjoyed it has taught us a lot about working in a team and compromising.”

Ability to lead others was the only area where less than 50% of students reported a definite increase in skill. However, opportunities for leadership are constrained in group work (i.e. not all team members could be leaders) so not all participants would have enjoyed equal opportunities to develop their leadership skills.

Table 3a: Has participating in the Design Ventura project improved your ability to design or improved your business ability? (%)

	Remained the same	Increased	Not sure	N
Ability to respond creatively to a design brief	22	70	8	526
Ability to communicate design ideas	28	67	5	521
Ability to understand the business side of design (e.g. costs, marketing, profits)	28	66	6	520
Ability to work in a team	35	59	4	517
Ability to lead others	49	39	10	518
Ability to make good decisions in a business	35	55	8	520
Ability to present ideas to others in public	39	51	8	519

Interest in creative and business related skills

Design Ventura was intended to engage learners in the development of skills so that they would be motivated to learn in the future. Design Ventura programme has resulted in positive changes in interest for both creative and business related skills for 58% and 42% of participating students respectively. Around half of the students targeted had chosen design programmes so they are likely to have started with a greater disposition to be engaged by creative as opposed to business-related skills.

Table 3b: Has participating in the Design Ventura project changed your interest in creative and or business related skills? (%)

	Remained the same	Increased	Not sure	N
My interest in creative skills such as designing and making has ...	36	58	33	515
My interest in business related skills such as finance or marketing has ...	45	42	5	514

Increasing confidence and ambition amongst young people

Students were asked whether they perceived that participating in the Design Ventura project had improved their level of confidence and their ambition.

The evidence presented here confirms the finding from previous years that participation in this programme impacts positively on student aspirations. As in previous years, between 40% and 60% of all learners engaged in the programme report increases in general self-confidence (41%), and raised ambitions about what they expect to achieve in their studies (50%) and careers (43%).

Similarly, just over half (57%) reported improvements in their willingness to take on new tasks (see Table 4). However, more young people felt that their general self-confidence had remained the same (54%) than increased (41%). These results are consistent with those of previous years.

As in 2011, there was a higher incidence of students reporting an increase in ambition about what they expect to achieve in their studies than what they expect to achieve in their careers. A plausible explanation might be that it reflects awareness of real life limitations, such as a lack of available career opportunities in the current economic climate, despite their best efforts to achieve more in their studies. Interviews with students revealed that some students already had very definite career ambitions unrelated to design or enterprise and that they did not relate Design Ventura to their career plans.

Table 4: Has participating in the Design Ventura project improved your level of confidence and your ambition? (%)

	Remained the same	Increased	Not sure	<i>N</i>
General self-confidence	54	41	4	527
Willingness to take on new tasks which I have not tried before	38	57	4	523
Ambition about what I expect to achieve in my studies	43	50	7	517
Ambition about what I expect to achieve in my career	46	43	9	520

These data were interrogated to see if differences were evident according to year group or gender. Mostly there were no significant differences, the exception being a gender difference in levels of general self confidence. Females were more likely than males to report that their self confidence had remained the same than males. In fact, males tended to report in fairly equal numbers that their self-confidence had either remained the same or had

increased² (see Table 5 for a distribution of percentage responses by gender). It is possible that there is some feature of Design Ventura which makes it more encouraging of self-confidence in boys than girls (see p14).

Table 5: General self- confidence by gender (%)

	Male (N=155)	Female (N=367)
Remained the same	45	58
Increased	48	37
Not sure	7	3

Teachers' perceived impact on student skill levels

Teachers were asked to monitor the progress throughout the programme of two identified students across a range of creativity and enterprise skills and attitudes/attributes. In total, teachers reported on 77 students in Wave 1 and 73 students in Wave 2 (see Table 6).

Table 6: Numbers of students included in impact analyses

	Wave		Totals
	Wave 1	Wave 2	
Student A	42	35	77
Student B	42	31	73
Totals	84	66	150

The capabilities of these students were assessed on a scale of 1-5, where '1' means very weak and '5' means very strong. These data were treated as scores so that averages could be calculated for each skill level.

In total, 33 students appeared in *both* waves (compared to 28 in the previous year). Their scores were used in statistical tests for significance which confirmed that differences between the pre (Wave 1) and post (Wave 2) programme scores were unlikely to have occurred by chance.

Design and business skills

The statistical tests confirmed that after students had participated in the Design Ventura programme, there were significant gains in their skills, as perceived by teachers, across the range of design and business/enterprise capabilities explored.³

² Chi square statistics revealed showed a significant gender association at the $p < 0.05$ level of confidence.

³ Related t-tests for each of the skills listed were highly significant ($p < 0.01$)

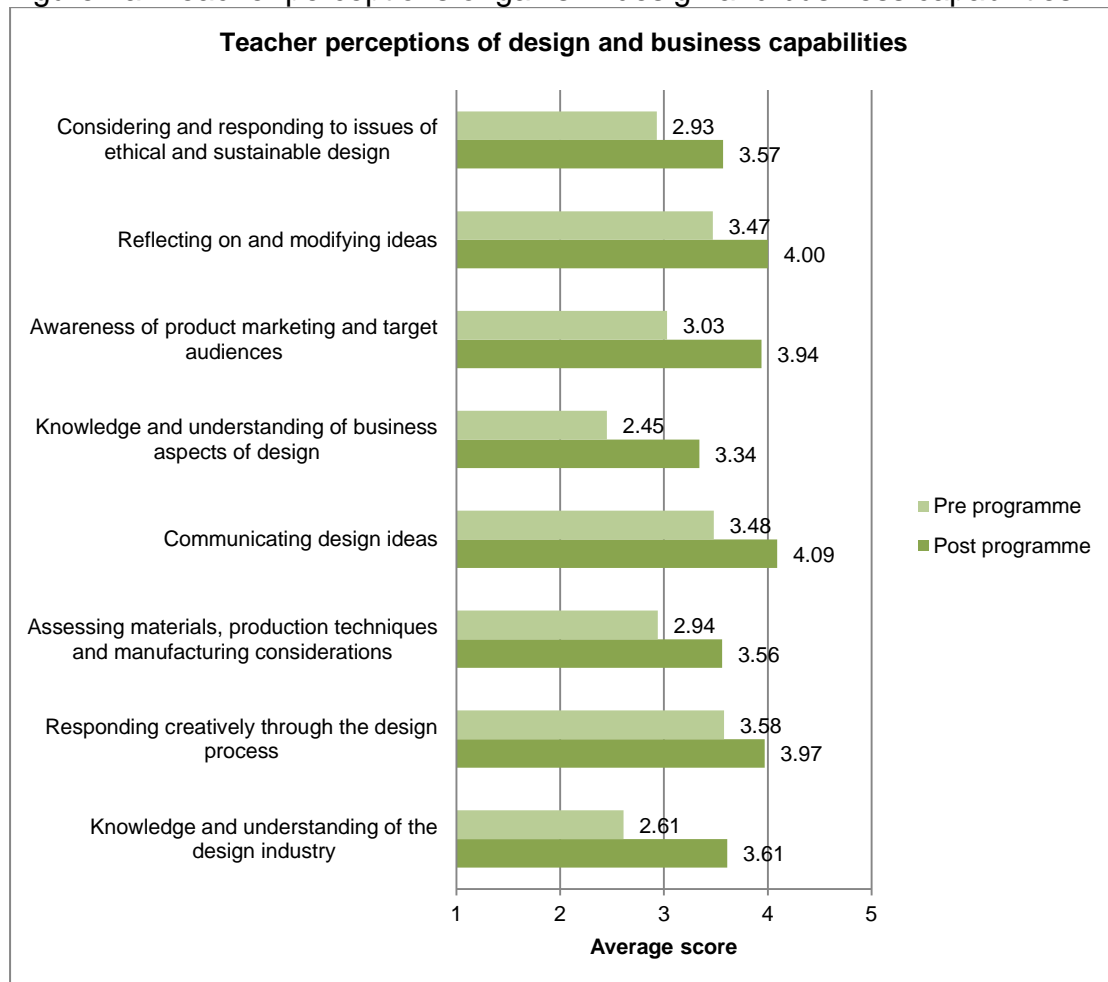
Figure 2a illustrates the gains in skill levels. Although all gains were highly significant, the greatest gains appear to be in:

- Knowledge and understanding of the design industry⁴
- Knowledge and understanding of business aspects of design⁵
- Awareness of product marketing and target audiences⁶

Smaller gains, but significant gains non-the-less, appear to be in:

- Responding creatively to the design process
- Reflecting and modifying ideas
- Communication skills.

Figure 2a: Teacher perceptions of gains in design and business capabilities



(1 = very weak; 2 = weak; 3 = average; 4 = strong; 5 = very strong)

⁴ Shows a step change of +1 between pre and post programme scores

⁵ Shows a step change of +0.9 between pre and post programme scores

⁶ Shows a step change of +0.9 between pre and post programme scores

These data suggest that the Design Ventura experience has caused the gains in skill. However, we cannot confirm categorically that this is the case for a number of reasons. In particular, there is no control group to compare scores with (i.e. a group of students who did not participate in the programme). Further, the scores are teacher perceptions of skill and not test results. We do not know what other experiences students might have been exposed to and whether these skills have benefited from learning in other lessons. All things considered, we cannot be sure that the gains in skills would not have occurred in these students had they not participated in the Design Ventura programme.

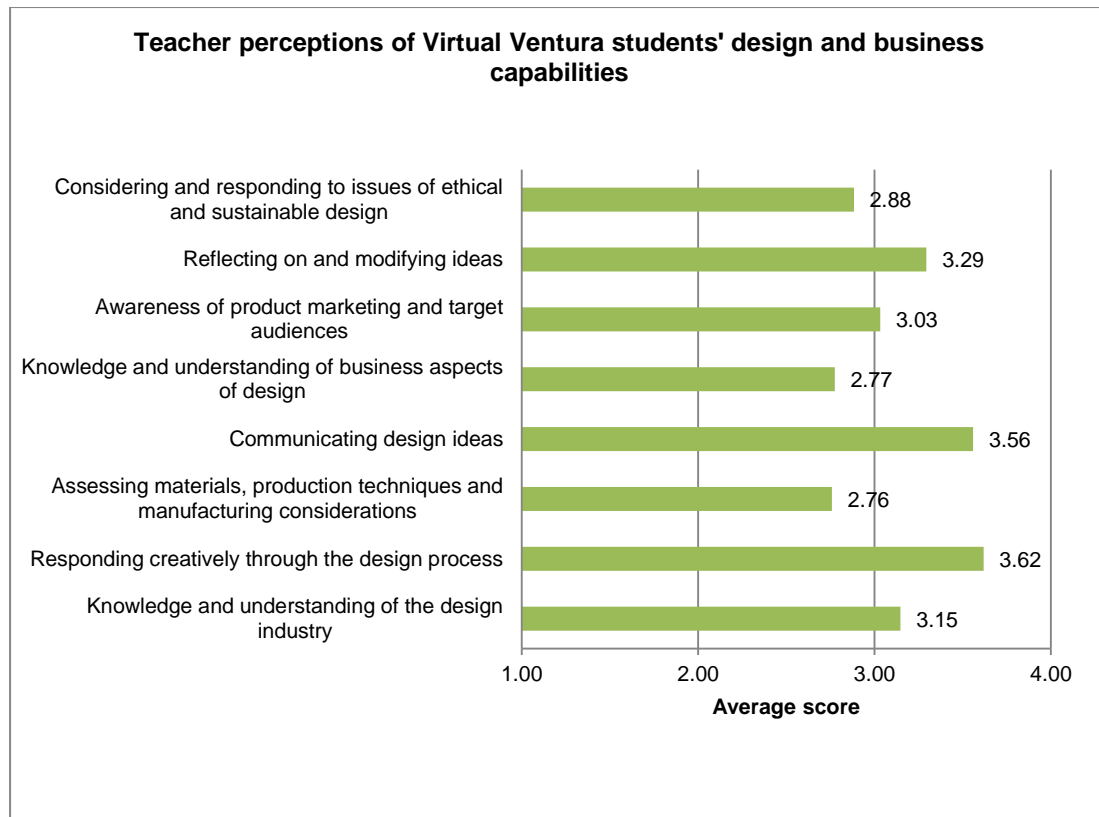
Teachers' perceptions of Virtual Ventura

Virtual Ventura was delivered by teachers with on line support from the Design Museum. All resources and support was accessed on line. Mostly, the Virtual Ventura programme was delivered in lesson time according to almost three quarters of teachers (74%), although around a third (31%) said that it was delivered during lunchtimes (31%) and a further third said they ran after schools sessions (34%).

Teachers who participated in Virtual Ventura were not asked to monitor students pre and post programme, instead they were asked to assess the impact that they felt the programme had on the design capabilities of their students. For this reason it is difficult to make comparisons between Design Ventura and Virtual Ventura teachers' views.

There was great variability with between 60% and 97% of Virtual Ventura teachers rating the programme as having good or very good impact on their students across the range of design and business skills considered. For consistency and comparison with mean scores presented in Figure 2a, Virtual Ventura man scores are presented in Figure 2b below to illustrate perceived impact.

Figure 2b: Teacher perceptions of impact on Virtual Ventura students' design and business capabilities



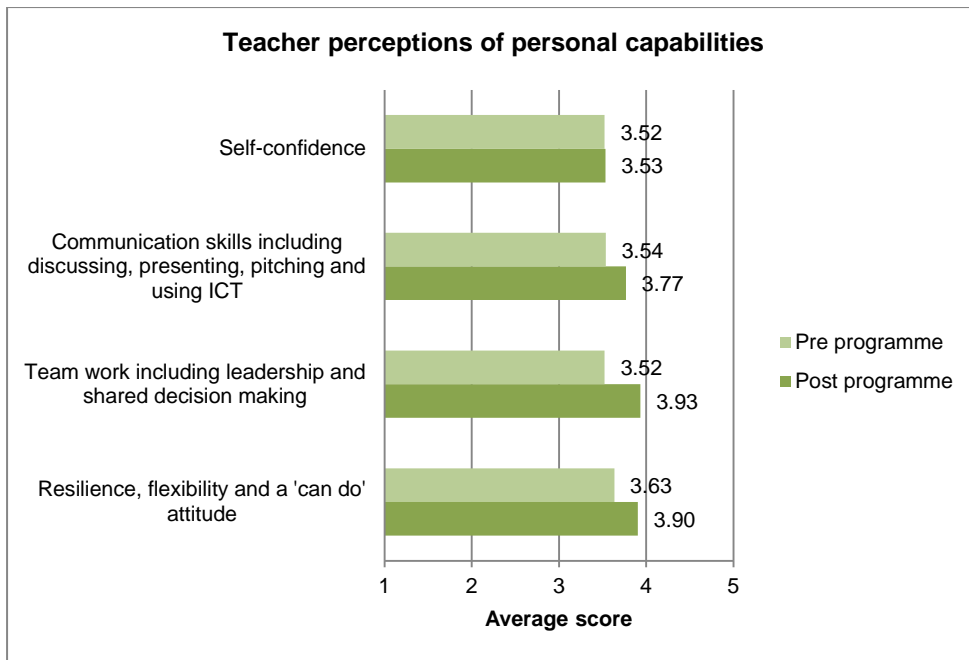
(1= low impact; 2= some impact; 3 = good impact; 4 = very good impact)

Personal capabilities

Figure 3 presents data showing gains in general capabilities as measured after participation in the Design Ventura programme. The same procedure as before was applied to these data for statistical testing.⁷ These results also show significant gains in skill levels following participation in the Design Ventura programme, with the exception of self-confidence, where no difference was reported. The same caution should be exercised here as before regarding causality. That is, we cannot be sure that gains in these skills would not have occurred in these students had they not participated in the Design Ventura programme.

Figure 3a: Teacher perceptions of gains in students' personal capabilities (Design Ventura)

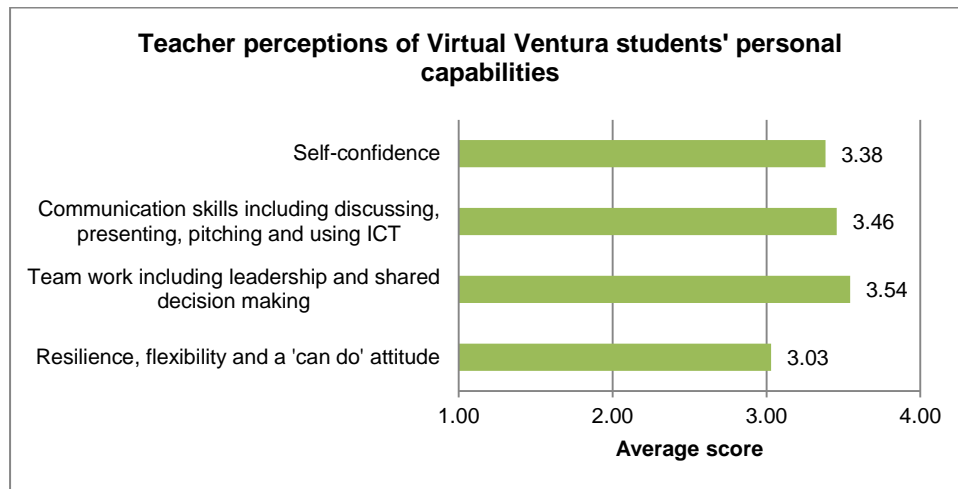
⁷ Related t-tests for each of the skills listed were highly significant ($p < 0.01$).



(1= very weak; 2 = weak; 3 = average; 4 = strong; 5 = very strong)

Teachers who participated in Virtual Ventura were also asked to assess the impact that the programme had on the general capabilities of students. Between 79 and 84% of them indicated that the programme had good or very good impact on their students across the range of general capabilities explored. These data are presented (mean scores) in Figure 3b below. Virtual Ventura had, on average, 'good' impact upon all of the capabilities identified.

Figure 3b: Teacher perceptions of gains in students' personal capabilities (Virtual Design Ventura)

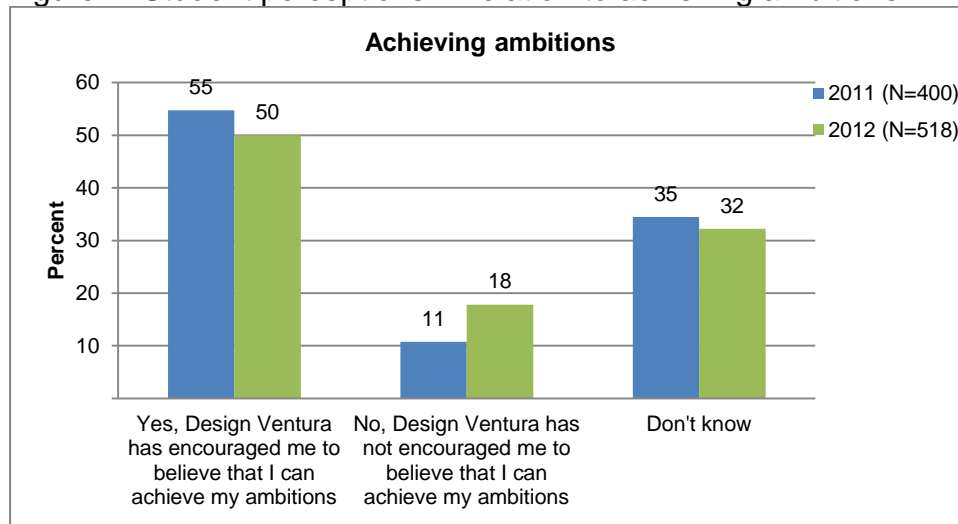


(1= low impact; 2= some impact; 3 = good impact; 4 = very good impact)

Achieving ambitions

Figure 4 shows that around half of the students surveyed (50%) agree that Design Ventura has encouraged them to believe that they can achieve their ambitions, while 18% believe the opposite. Just over a third, however, report that they are unsure about this. The trend is similar to that reported in 2011 however slightly more students reported positively last year than this.

Figure 4: Student perceptions in relation to achieving ambitions



Statistical tests on these data revealed a significant association⁸ between year groups 9 and 10, with a much higher proportion of year 10 students

⁸ Chi square statistics showed a significant year group association ($p < 0.05$).

(81%) reporting that the Design Ventura programme had encouraged them to believe that they could achieve their ambitions compared to year 9 students (67%). The survey data does not enable us to comment on how or why this association occurred.

Table 7: Year Group at School x belief that you can achieve your ambitions

		Has participating in the Design Ventura project this term encouraged you to believe that you can achieve your ambitions?		Total
		Yes	No	
	Count	107	54	161
	% Year 9	67%	34%	100%
	Count	141	34	175
	% Year 10	81%	19%	100%
Total	Count	248	88	336
	% within Year Group at School	74%	26%	100%

Significant associations were also found according to gender, with males more likely (83%) to report that the Design Ventura programme had encouraged them to believe that they could achieve their ambitions, compared to females (69%)⁹.

Table 8: Gender x belief that you can achieve your ambitions

		Has participating in the Design Ventura project this term encouraged you to believe that you can achieve your ambitions?		Total
		Yes	No	
	Count	85	17	102
	% male	83%	17%	100%
	Count	161	71	232
	% female	69%	31%	100.0%
Total	Count	246	88	334
	% Total	74%	26%	100%

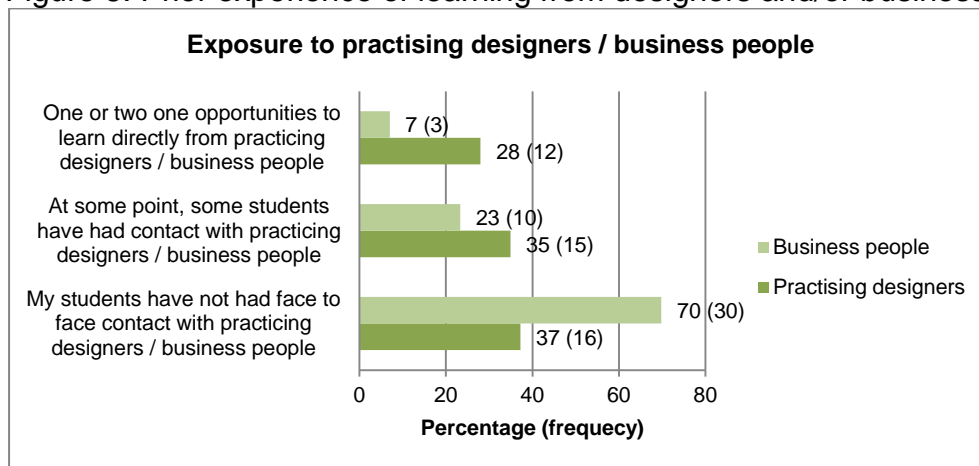
These findings raise a concern: why were girls less encouraged to believe that they could achieve their ambitions than boys? Some of this effect may be due to the gender composition of the two different cohorts. However, it is possible that the high challenge of Design Ventura (see p 14) was less encouraging for girls than for boys, something which deserves further investigation. There is no evidence that girls gained less than boys in terms of business or creative skills or knowledge.

⁹ Chi square statistics showed a significant year group association (p<0.05).

Increasing understanding of business within the design industry

The teachers' survey data suggests that many students did not have the benefit of face-to-face contact with designers and business people prior to Design Ventura: just over one in four (28%) had prior first-hand contact with practising designers and around one in three (30%) with practising business people. The first-hand encounters with design and business professionals that came through Design Ventura were valued by both students and teachers and evidence from interviews confirms that these encounters increased understanding of the business and design industry (impact reported in the section on student skills previously pages 16 and 17). As these data are derived from a relatively small number of teacher responses (N=43), frequencies are also presented in parenthesis in Figure 5 below.

Figure 5: Prior experience of learning from designers and/or business people



Building sustainability

Teachers in Wave 2 were asked if in future they would use other projects that brought together enterprise and design. Their responses suggest that participating in Design Ventura has stimulated teachers' appetites for this kind of approach as 97% of Design Ventura and 88% of Virtual Ventura teachers said they would look for other opportunities in the future. Further, the majority would like to participate in the same programme again in future (97% of DV teachers and 91% of VV teachers) These data are presented in Table 9 and are not dissimilar to those reported in previous years.

Table 9: In future, will you teach further projects that bring together enterprise and design? % responses (frequency in parentheses)

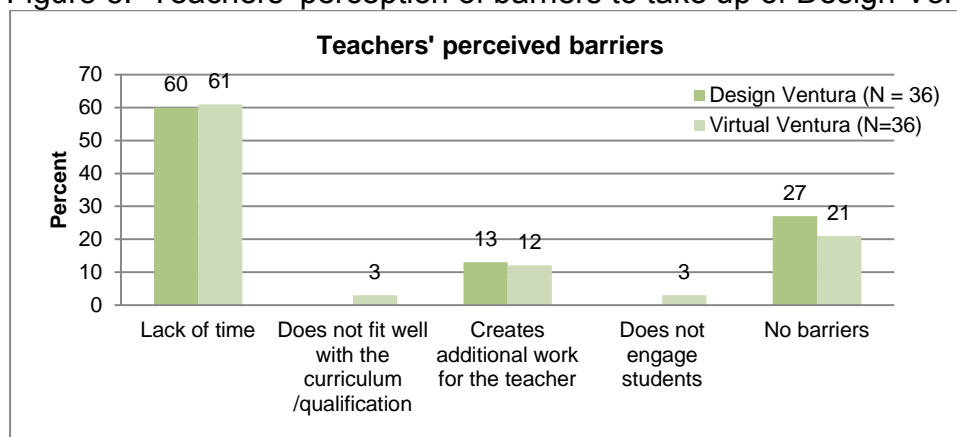
	Design Ventura (N=43)	Virtual Ventura (N=36)
I would like to participate in Design Ventura again /in future	97 (30)	32 (10)
I will look out for other opportunities to combine	97 (29)	88 (30)

enterprise and design in teaching		
I plan to use the web version of Design Ventura in the future	48 (14)	91 (32)
It is unlikely that I will do this kind of project again	8 (2)	12 (3)

Note: Some schools may not be able to access Virtual Ventura as the platform used to deliver Virtual Ventura is sometimes classified as a social networking site.

Both Design Ventura teachers and Virtual Ventura teachers were asked about barriers to the teaching of enterprise and design together (Figure 6). As in previous years, lack of time is reported as a major barrier among participants with around two thirds indicating this. However, around a quarter of teacher respondents reported that there were no barriers. Last year, Design Ventura and Virtual Ventura teachers varied in their opinion regarding how well the programme engaged students (5% of the former and 26% of the latter stating that it did not fit well). There is much less variation this year with none of the DV teachers and 3% of VV teachers reporting this as a barrier.

Figure 6: Teachers' perception of barriers to take up of Design Ventura



Providing a learning experience of the highest quality

As reported above (Figure 1), a two-third majority of students were positive in their judgement regarding their overall experience of Design Ventura.

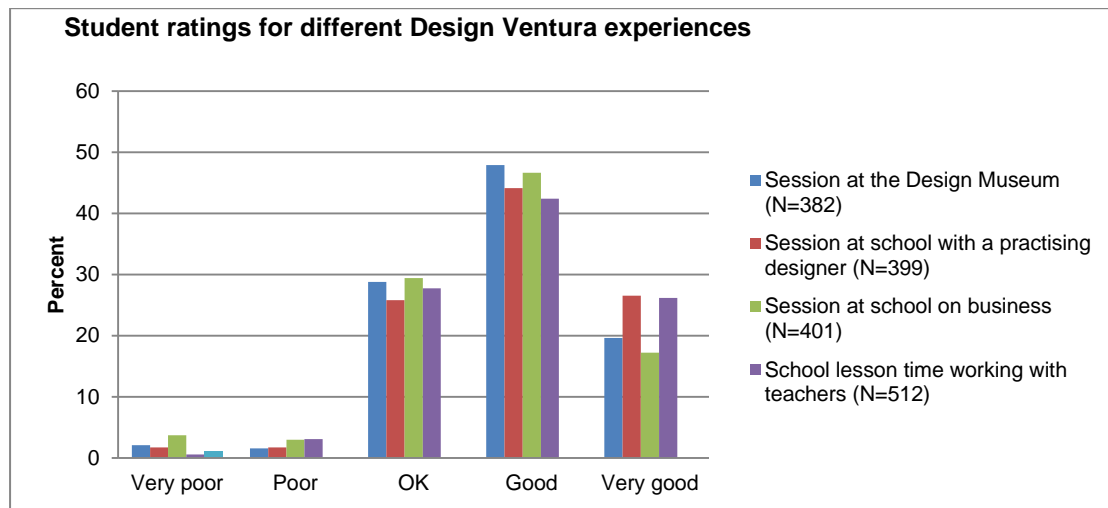
Similarly, when asked to rate specific aspects of the programme such as the session at the Design Museum, visits from practising designers and business people, and lessons spent on Design Ventura at school with their teacher, around two thirds (64% - 71%) gave a rating of good or very good. These data are presented in Figure 7. Around a third gave a rating of 'okay' or worse indicating that there was room for improvement according to some students.

Working with a practising designer was rated most positively according to the numbers rating this as good or very good (71%), closely followed by the session at school on business or in class with a teacher, both achieving a

combined 69% good/very good rating. It is worth noting that, taken together, students did not regard some elements within the programme as much more valuable than others. This suggests that either the preferences of different students were balanced out or that students judged the programme as a whole rather than separately judging different elements.

These data are consistent with results reported in previous years.

Figure 7: Satisfaction with different Design Ventura sessions



Outcomes for teachers

Prior experience

Prior teaching experience was varied, although the majority (90%) had at least some experience of teaching students part of the design and enterprise process (e.g. generating ideas, research, design development, creating a prototype for manufacture and communication).

This year saw fewer teachers claiming to have extensive experience of teaching the whole design and enterprise process with just over a quarter of them indicating this (28% compared to 40% last year). Around a quarter (28%) said they had taught students part of the process and 10% had no experience of teaching any part of the design and enterprise process.

This finding suggests that the Design Museum has recruited teachers who are not already practised in the mode of teaching and learning provided by Design Ventura. This is a positive finding since it suggests that Design Ventura is extending teacher's experiences rather than simply repeating them. The finding also implies that aside from Design Ventura, teachers of design only have experience of teaching elements of the design and enterprise process rather than the whole process.

Teacher capability

Teachers were asked to judge their own capability to teach enterprise with design. Despite their various levels of experience, almost three-quarters (73%) reported that their existing capability to teach enterprise together with design as good (63%) or very strong (9%).

Teachers were asked to indicate their level of agreement with statements about what they had gained from taking part in the Design Ventura programme. Responses were positive with a majority reporting that the programme was helpful in developing a better understanding of how to engage students and how to plan and teach them about enterprise and design together and of what resources and people could be used support such teaching. Responses are presented in Table 10.

Table 10: Level of agreement regarding gains from participation in Design Ventura % (2011 results in parentheses)

	Design Ventura N=35 (N=21)			Virtual Ventura N=36 (N=20)		
	Agree	Disagree	Don't know	Agree	Disagree	Don't know
A better understanding of how to engage students to learn about enterprise and design	91 (95)	9 (0)	0 (5)	91 (80)	3 (0)	6 (20)
A better understanding of how to plan and teach enterprise and design together	81 (76)	13 (0)	7 (24)	91 (85)	6 (0)	3 (10)
A better understanding of what resources and people can be used to support the teaching of enterprise and design	88 (100)	12 (0)	0 (0)	79 (80)	15 (5)	6 (15)

Teachers participating in Virtual Ventura were more likely to agree that the programme had helped them to understand how to plan and teach enterprise and design together than those participating in Design Ventura. This may result from the fact that Virtual Ventura recruited more diverse and remote schools and these teachers may have been less familiar with the pedagogy offered and, therefore, had a greater opportunity to learn something new.

Impact value

The final section of the teachers' survey asked them to rate the value of particular features of Design Ventura. All of the DV teachers and most of the VV teachers valued or highly valued working to a real brief. Highly positive results were also displayed for combining design and enterprise learning and

competing with other schools. Design Ventura teachers also highly valued activities at the museum and team working.

These data are presented in Table 11.

Table 11: Value ratings for various features of Design Ventura/Virtual Design Ventura - % rated highly or very highly (2011 results in parentheses)

	Design Ventura N=35 (N=21)	Virtual Ventura N=36 (N= 20)
Working to a real brief	100 (100)	97 (100)
Activities at the museum	91 (100)	Not asked
Access to designers	94 (66)	Not asked
Access to business people	85 (76)	Not asked
Competing with other schools	85 (86)	75 (80)
Team work	100 (90)	Not asked
Combining design and enterprise learning	97 (90)	94 (90)
Online resources (e.g. videos and downloads)	85% (-)	Not asked

In addition, most Design Ventura teachers reported that seeing the exhibition at the Design Museum, visiting the museum workshop, using the handling collection and visiting the museum shop impacted highly on their students.

- The exhibition (85%)
- The museum workshop using the handling collection (84%)
- The visit to the museum shop (90%)

Virtual Ventura Website

Virtual Ventura teachers were asked an additional set of questions about the value of some of the elements of the Virtual Ventura website. Table 12 presents these data.

It seems that blogs and the Teacher forum were considered to have no value by around a quarter of teachers, and were generally considered to have lower value overall than some of the other features. This trend is consistent with that reported last year. In contrast, a high proportion of teachers (between 60 and 77%) rated the case studies, teaching and learning resources and short films favourably (as valuable or highly valuable). These figures are similar in trend but slightly less than those reported previously

Table 12: Valuation of elements of the Virtual Ventura website - % (2011 results shown in parentheses)

	No value	Some value	Valuable	Highly valuable	Don't know
Blog	21 (15)	47 (45)	6 (15)	9 (5)	18 (20)
Short films	0 (0)	23 (20)	37 (40)	40 (30)	0 (10)

Expert tips	3 (0)	26 (30)	37 (50)	17 (15)	17 (5)
Teacher forum	21 (30)	15 (40)	15 (20)	6 (10)	42 (0)
Teaching and learning resources	6 (0)	34 (25)	60 (50)	0 (25)	0 (0)
Case studies	0 (0)	23 (10)	31 (60)	40 (30)	6 (0)
Project plans	0 (0)	15 (25)	38 (50)	41 (20)	6 (5)

N=36 (20)

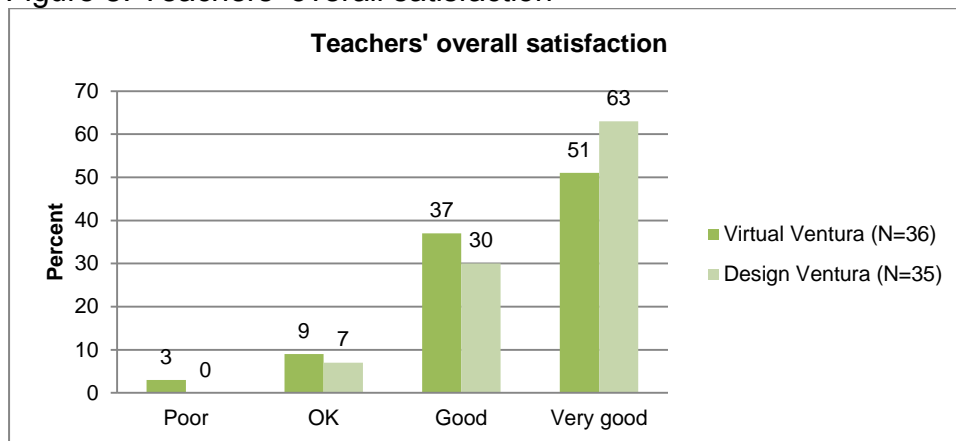
Other resources used to support Virtual Ventura included:

- Design Museum shop website (91%)
- Design Museum man website (34%)
- Visit to the Design Museum (31%)

Teachers' overall experience

88% of VV and 93% of DV teachers gave a rating of good or very good for their overall satisfaction with the Design Ventura and Virtual Ventura programmes. These data are presented in Figure 8 (with frequencies also shown in parentheses for clarity as numbers are very small).

Figure 8: Teachers' overall satisfaction



Final comments

Student comments

The survey invited students to give written comments on what they **liked best** about working on Design Ventura. 499 comments were offered. As in previous years, visits to the Design Museum, working as a team and the process of designing products, e.g. drawing, and making models and prototypes were popular features of the programme which are enjoyed and valued by participating students.

“Working with designers during the trips and in house workshops. We also enjoyed visiting the museum to view other products by designers.”

“Working on a team and meeting new people. Pushing myself to do new ideas and be more aware of my confidence.”

“Working in a group with people you know and can talk to. Being able to choose what you want to be (e.g. a designer, part of the management team).”

“Working as a team and being able to get some work experience. This trip has also boosted my self confidence.”

“We had a chance to be creative and think of different, fresh, unique ideas to improve our creative skills and these things made us expand our product idea to make it different from similar products in the mark.”

Students were also invited to comment on what they **liked least** about Design Ventura. This generated 480 comments. Again, they were similar to those offered in previous years with many commenting on the lack of time to finish their designs and/or prototypes. For some, the finance and costing side of things was least liked, while others disliked the research, presentation and pitching side of things. Several students however commented that there was nothing that they did not like (around 10%).

“The thing I liked the least was having to come in early and stay back late at school to complete unfinished work. We still didn’t get all the work finished in time.”

“The thing I disliked about working on the Design Ventura was that only one team per school can go through.”

“The amount of work needed to fully develop the design and only one group from each school goes through.”

“When the other designers came to help us I felt [it] was not for backing up our ideas. The designers just gave us many different ideas and I was confused.”

“There were too many different problems we had to solve which took up a lot of our time as we had to change our product numerous times.”

Design Ventura teacher comments

Wave 2 teachers were invited to give written comments on how Design Ventura could be improved, which generated 17 comments. Many of them echoed the students’ views that more time would have been useful to enable students to complete the project, and it was suggested that an earlier start might solve the problem (e.g. start in July).

There were some comments about accessing resources online indicating that this needs to be addressed if the programme is to continue in this way. For example:

“Resources on the website should be easier to navigate through. Maybe have a Youtube version of the brief as it wouldn’t play it at school as it had been filtered (students watched it at home for homework though).”

“It was hard to access some of the online materials at times. For example I could not open Vevo during my first couple of attempts. Our ICT support had to work their magic to get it up and running”

Also, some commented that better planning and communication between the designers and teachers would be helpful so that that resources could be prepared for the hot house sessions and students could be got to the stage when they could make best use of the session. Some teachers were concerned that the hothouse sessions were not timed optimally in relation to the stage that their students had reached. One teacher wrote:

“The design hothouse session repeated everything we had previously covered in lessons (based upon your lesson planning) and therefore seems redundant. The business hothouse was poor and had no business professional in attendance.”

There were a couple of comments about the theme, one pointing out that this has to be carefully selected and noting that last year’s theme of play was more successful in their school than this year’s journey theme. Another commented that the theme of journeys was too broad a topic, which made the selection of a concept extremely difficult for students.

In addition, 21 teachers gave final comments which were very positive and encouraging. There was agreement that the project was very well organised and held in high regard, summed up by comments such as:

“This project is a fantastic opportunity to give students a real life working brief and insight into the business and enterprise aspect of design. The project has again been extremely well organised and all the staff involved have been fantastic. It has been a pleasure to be involved in the project again.”

“Great to encourage independent learning and confidence skills. It really pushed students to succeed.”

“Great experience having professionals in the classroom.”

“The students were really engaged as they were given a 'real' brief and they enjoyed the competitive aspect of it. The 'pitching'/Powerpoints were shown in assembly and as a result the entire school were talking about the projects and were engaged.”

Virtual Ventura teacher comments

Comments from the Virtual Ventura teachers also suggested improvements. Some echoed previous calls for more time and better communication, for example:

“More time given - additional help with industrial, production techniques and resources. Template design sheets.”

“More regular updates to ensure that I am on track - or a suggested timetable to work to.”

“Provide more information about the areas the pupils will be studying - green technology, recycled materials, existing green products. The theme was a little too open for year 9 pupils.”

“Have advertising etc. about its existence. I found project by accident!!”

Virtual Ventura teachers also commented positively about the programme, again demonstrating its popularity and value teachers and for students

“Fantastic to have a design competition that British International Schools can take part in. Fabulous idea..THANK YOU !!!!. Also thought the brief video was fantastic.”

“We all really enjoyed this project. The pupils were engaged and worked well. Visit to Design Museum was excellent. Would like to attend the training session before it starts next time.”

“The students really enjoyed the experience. They really surprised me with their enthusiasm and team work.”

“The experience of 'live' projects is great for students; webs chats, links with industry, being exposed to financial restriction etc. is all good. The extra time required to organise this type of activity is worth it.”

4: Conclusions

Impact

The evaluation of the 2012 programme has provided evidence which demonstrates that the Design Ventura programme provides a learning experience of the highest quality. Both students and teachers have indicated high levels of satisfaction and enjoyment for all elements of Design Ventura. Overall ratings of the Design Ventura experience showed a slight improvement on 2012: 88% teachers and 71% of students rated their experience of the project as good or very good.

Data in relation to learning outcomes confirms that the 2012 Design Ventura programme improved enterprise and creativity skills for the majority of participants. The target set was that 60% of participants should experience an improvement of a range of identified enterprise and creativity skills. This was achieved for responding creatively to a brief, communicating design ideas and understanding the business side of design. More than 50% of participants reported an improvement in team working ability, ability to present and to make good decisions while 39% reported an improvement in their ability to lead others. Over three years Design Ventura had least impact on leadership skills according to learners. However, it is clear that some students have advanced their leadership capability a great deal; not all students had the opportunity or desire to lead. Teachers perceived a significant increase in the abilities of sampled students for team work including leadership and shared decision making.

The 2012 evidence confirmed the findings of previous years that, according to teachers' perceptions of students skills pre and post programme, Design Ventura has helped students to *significantly* improve their design and business enterprise skills. As in the previous year, teachers judged that students had made particularly strong progress in their learning about product marketing and target audiences (the domain which Sebastian Conran has identified as crucial for business viability of design and as a focus for Design Ventura). Teachers also judged that learners had made strong progress in their knowledge and understanding of the design industry; this suggests that Design Ventura has succeeded in extending learning beyond a particular task and product to the broader context in which design takes place. This is an important finding since many of the features of Design Ventura, for example the involvement of professionals and the setting of a real brief, are intended to facilitate learning about context.

The programme has also impacted on attitudes and attributes. 57% of students reported an increase in personal initiative¹⁰ and teachers also reported a significant increase in 'resilience, flexibility and a "can do" attitude'. 50% of participants reported an increase in what they expected to achieve in

¹⁰ 'Willingness to take on new tasks which I have not tried before'

their careers. This falls short of the ambitious 70% target and is also slightly worse than the 56% reported last year. It may be that the ambition of participants has been depressed by the current economic recession.

Although there was a significant impact on personal attributes and beliefs this impact was not as extensive as the impact in relation to design and enterprise skills and knowledge. 41% of students reported an increase in self-confidence. Teachers saw only a marginal impact on self-confidence of students.

As explained above (p.14), Design Ventura is a learning project with a high level of challenge for learners which may help to explain why many students did not experience any increase in self-confidence or become more optimistic in their career ambitions although they reported improvements in skills and knowledge. It is worth noting that Year 10 students were significantly more likely than Year 9 students to report that Design Ventura had encouraged them to believe that they can achieve their ambitions. This may be because Year 10 students have selected design GCSEs and are more committed to careers in the design industry. It may also be because Year 10 students, being somewhat more mature, were less challenged by Design Ventura than Year 9 students.

All the main features of Design Ventura were individually rated highly or very highly by the vast majority of teachers. In particular, working to a real brief, activities at the museum, team work, access to designers and combining design and enterprise were rated highly, or better, by at least 90% of teachers. Particular activities at the museum that were valued included: visiting the exhibition, the workshop and the visit to the museum shop.

Design Ventura also helped to develop teacher capability: 91% of all participating teachers agreed that the programme gave them a better understanding of how to engage students in learning about enterprise and 81% agreed that it gave them a better understanding of how to teach enterprise and design together and of the resources and people that could support it.

Virtual Design Ventura

Between 60 % and 97% of Virtual Ventura teachers indicated that the programme had good or very good impact on their students across the range of design and business skills considered which is very similar to last year (65% and 85%). Virtual Ventura was judged by teachers to have good to very good impact on some capabilities: communication of ideas, responding creatively to the design process, reflecting and modifying ideas, awareness of product marketing, knowledge and understanding of the design industry. The programme had a good impact on: knowledge and understanding of business aspects, ethical issues to design and assessing materials and

production issues. Virtual Ventura was judged to be somewhat less effective than Design Ventura in increasing knowledge and understanding of business aspects of design.

Virtual Ventura teachers expressed a high level of general satisfaction with the programme: 88% judged it to be good or very good as compared to 93% of Design Ventura teachers (85% was the target). However, 63% of teachers participating in Design Ventura judged it to be very good as against 51% of those participating in Virtual Ventura. Interviews with teachers also suggest that some, though not all teachers, particularly value the face to face contact that the Design Ventura programme offered – and it was these experiences which for them made the project outstanding.

The Virtual Ventura teachers, like the Design Ventura teachers, particularly valued the opportunity to work to a real brief, to combine enterprise and design learning and to compete with other schools. Virtual Ventura and Design Ventura were agreed that their programmes helped them to better understand how to engage students to learn about enterprise and design but the Virtual Ventura teachers were more likely to report that they had improved their understanding of how to plan and teach enterprise and design together. This suggests that Virtual Ventura has potential to help develop methods of teaching and learning – perhaps because it can reach out to teachers across a wider geographical and cultural domain and model pedagogies with which participants may be less familiar.

The web-resources available for Virtual Ventura were expanded in 2012. 79% of the Virtual Ventura teachers found the project plans to be valuable or very valuable. The short films and the case studies were also well valued by more than 70% of respondents. The blog (15%) and the teacher forum (21%) were well valued only by a minority.

Lack of time is perceived as the major barrier to participation by teachers participating in both Design Ventura (60%) and Virtual Ventura (61%). However, in other respects teachers were less likely to identify barriers in 2012 than in the previous year. There was very little difference between the perception of barriers across the two programmes.

Sustainability

The Design Museum has sustained participation in Design Ventura which at 1457 this year is well above the 600 per annum planned and up from 1165 in 2011. Virtual Ventura has grown in popularity exceeding target participation: 3910 students participated in Virtual Ventura in 2012 against 2025 (2011) and 912 (2010).

Demand for Design Ventura is growing. Some schools have sustained their participation and new schools have joined. 97% of Design Ventura teachers said they would like to participate in the programme in the future and 32% of

Virtual Ventura participants said that they would like to participate in Design Ventura. 91% of Virtual Ventura participants and 48% of Design Ventura participants say that they plan to use Virtual Ventura in the future, in some way.

We have evidence that the schools recruited to Design Ventura are, for the most part, schools that are not otherwise able to provide learners with access to business and design professionals to support their learning. 70% of teachers reported that their students had, until this project, no contact with business people and 37% said they had no contact with practising designers. This suggests that Design Ventura has continued to plug a gap and that this is not a service that is already provided in some other way for most of these teachers.

Design Ventura is now a mature programme. Effective processes have been established for delivery and communication. Teachers, museum educators, business and design professionals have been engaged and trained and have developed a commitment to the programme. Teaching and learning resources have been developed and networks of trust and goodwill established. This means that the reputations of the Design Museum and Deutsche Bank have been enhanced and the schools and teachers are more likely to commit to working with them in the future. A considerable fund of experience has been developed with teachers, contributing professionals and museum educators. This experience can be used to sustain this programme and it could also contribute to other related programmes. Over the three years of the programme, these achievements have been drawn upon to make improvements and innovative developments (such as the development of Virtual Ventura) which demonstrate that investing in a medium programme can lead to impacts beyond initial targets and provide the seeds for new ways of working.

Virtual Ventura has demonstrated that it is an educationally worthwhile programme. While formal measurement of learning outcomes suggests that its impact is slightly less in some respects than that of Design Ventura, teachers are agreed that it brings the same kinds of gain to students and to their teachers and broad levels of satisfaction are similar. Furthermore, Virtual Ventura has the capacity to engage many more schools and learners, including those remote to the Design Museum, and can take advantage of future innovations in e-learning. We do not know from this evaluation the national or global market demand for Virtual Ventura but we do have evidence that once schools start using the programme they are likely to sustain their use.

5: Recommendations

1. It is desirable that the 'educational capital' that has been built up in Design Ventura should not be lost, wasted or allowed to decay. The Design Museum should explore, in consultation with stakeholders, ways in which the processes and practices that have been developed in this project might be sustained.
2. Virtual Ventura represents one way in which much of Design Ventura could be sustained. Thought should be given to how Virtual Ventura might be funded and maintained, how it might connect to 'real' activities and how it might be grown and developed so that it continues to improve and remain responsive.
3. The evaluation has demonstrated that connections and interactions between business and design professionals, on the one hand, and learners/teachers, on the other, have contributed to the outcomes of Design Ventura. Thought should be given as to how these connections might be sustained or developed. There may be new ways in which these connections might be brokered or facilitated.
4. Although there are advantages to providing a common programme for all schools, this evaluation suggests that there are also advantages associated with flexibility and variety. Some flexibility was built into Design Ventura, for example, about how it was delivered in schools, and further flexibility obtained from Virtual Ventura. This flexibility helped to make the programme work for different schools. Schools have different needs and wants and it may be more efficient for the Design Museum to offer more of an *à la carte menu*. We know that some schools particularly value visits whereas other schools find them either less valuable or more difficult to organise. It might be possible for schools to select the activities that they want to participate in or to participate in some activities in the real world and some on-line. Further, it might be possible to develop somewhat less challenging versions of Design Ventura which might be more effective at building confidence and aspirations of younger and less able learners (see 5 below).
5. The programme could be developed to do more to address those learning outcomes where impact was relatively weaker: leadership, general self-confidence and ambition. For example, teams could be encouraged to experiment with different leaders for different phases of the project. Learning in relation to general self-confidence and confidence in relation to particular activities might be addressed by explicit exploration of confidence issues, for example, by the business volunteers or through peer learning.
6. Design Ventura is a learning activity of relatively high complexity and challenge. In general the evaluation did not find that there were

differences in benefits for different *types* of learners, for example, boys/girls, year 9/year 10. However, it did find that there were differences in benefits for different learners. It is possible that the high challenge of Design Ventura did not suit less confident or less able learners as fully as it suited their more confident and able peers. This is something that might be investigated further in the future.

Appendix 1

Design Ventura Project Targets 2012-13		Updated 7 Jan 2013
Target Description	Target	Actual
It is important to include your original targets alongside any additional targets you wish to include going forward; this will help us to track the progress of your project over the full duration of the partnership.	Number / Percentage	Number/ date achieved
Virtual Ventura Students engaged	2500	3910
Virtual Ventura Schools engaged	70	76
Students engaged in Design Ventura workshops	800	1691 registered 1603 participated
Launch workshops delivered at Design Museum	40	46 booked 40 took place
Design hothouse workshops delivered in London state schools	40	46 booked 39 took place
Business & Enterprise hothouse workshops delivered in London state schools	40	45 booked 39 took place
Design Ventura teacher attendance at CPD events	25	19
Virtual Ventura teacher attendance at CPD event	25	32
Teachers attending twilight CPD	No target	14
Volunteer attendance at preparation / briefing events	35	38 Breakdown: 7 (DB staff on 19 July) 915 (DB staff on 4 Sept) 21 (designers on 5 Sept) 4 (designers briefed directly by KK)
Deutsche Bank priority schools engaged	10	11 registered 8 participated 7 submitted competition entries
Schools engaged in New Museum catchment area (boroughs of Kensington & Chelsea, Westminster, Hammersmith & Fulham, Brent, Wandsworth)	7	9 registered 7 participated
Virtual Ventura schools self-directed visits to Museum and launch workshops	10	16 Breakdown: 6 S'directed 10 Workshops