An Evaluation of the 2011 Design Ventura Programme

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Centre for Education & Industry

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Acknowledgements

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1: Introduction

Background

Design Ventura is an enterprise 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 13-16 the opportunity tackle a brief, set in collaboration with a leading designer. In 2011 this was interior designer and broadcaster, Naomi Cleaver. 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 will provide support, expertise 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 is expected to run for three years. It is 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. Low response to questionnaires limited the extent to which conclusions could be drawn from quantitative data. However, qualitative evaluation revealed in some detail how teachers and learners were responding to different elements of the programme. Evaluation from the first year fed into the design of the

programme in the second year. The design and administration of the surveys was improved resulting in better response rates. This has permitted a more thorough quantitative analysis of value-added, impact and a more detailed exploration of the responses of teachers and learners.

Aims and objectives

Design Ventura has expressed the aims of the programme in terms of the specific outcomes and targets. The aims, outcomes and targets are set out in Table 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.

Impact 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.

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Impact Measurement Area	Aim	Outcome Indicators	Anticipated outcomes
1.Skills	To improve enterprise and creativity skills amongst young people	-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	• 60% young people experience an increase in enterprise skills and creativity.
2.Attitudes/Attributes	To increase confidence and ambition amongst young people	-Increased self-confidence. -Increased ability to handle uncertainty -Raised career and education aspirations -Reduction of perceived barriers to success/achievement	• 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	-More business and design professionals actively involved in design-enterprise education -Number of applications to trade at Ventura Pitching Events.	• 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.	-Increase of schools participating during for more than 1 year of the programme -Take up of Virtual Ventura and Ventura Awards following CPD	• 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.	-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.	• 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. 32 schools were recruited to Design Ventura (30 in 2010) and 56 to Virtual Design Ventura. 13 Deutsche Bank priority schools participated including those 2 participating in the virtual version of the programme.

A full day of CPD for teachers was held in July 2011 with 21 teachers attending. Training was provided for the staff delivering the planned workshops along with briefing sessions for designers and Deutsche Bank volunteers.

Learning content for the programme was developed and mapped against GCSE curricula to ensure relevance for schools. The content was informally reviewed by practising teachers. Handbooks, teachers' notes for all workshops and other support materials were prepared and reviewed by the Design Museum team.

During the first half of the autumn term, 42 launch workshops were held at the Design Museum, which included participation from business volunteers. There followed 36 'hothouse' sessions in school with a business focus and 37 'hothouse' sessions in schools with a design focus.

Schools submitted their entries to the Design Museum at the end of November and 10 teams of finalists were invited to present their designs at a pitching day at the Design Museum in December 2011. The winning school was announced in February 2012: Walworth Academy in Southwark, with their idea 'Slick Shooter', a new take on tiddlywinks.

2: Methodology

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

Administrative data

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

Data on activities and learning outcomes

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

Four questionnaires were issued and data from these have been analysed.

- A survey of teachers, pre activity (Wave 1)
- A survey of teachers, post activity (Wave 2)
- A survey of teachers, post activity (Virtual Design Ventura)
- A survey of students, post activity.

The student survey was conducted through school teachers, either at the Design Museum or at the school.

3: Results

In total 32 schools participated in Design Ventura and 56 participated in Virtual Ventura.

Student profile

2025 students participated in Virtual Ventura 1165 participated in Design Ventura. Virtual Ventura students were not surveyed.

We received 499 Design Ventura student responses (compared to 146 in year 1). Consequently, our survey this year achieved a 43% response. The profile of students according to survey responses is summarised below with data presented in Table 1.

Gender

The survey data indicates that there were slightly more females than males participating this year but overall the gender balance is fair, which is in contrast to the gender profile last year when males outnumbered females by 3 to 1.

Ethnicity

Just over a third of student survey respondents described themselves as white (37%) The ethnic profile of participating students is similar to that reported last year (2010).

Year group

Just over a third of students surveyed were in Year 9 and just over a half were in year 10. In the previous year there were just over a quarter in year 9 and just over two thirds in year 10. Year 11 participants have remained constant at 5%.

Table 1: Student survey profile: % (2010 results shown in parentheses for comparison)

Gender	Male 46% (74%)	Female 52% (27%)	
Year group	Year 9 – 35% (27%)	Year 10 – 58% (67%)	Year 11 – 5% (5%)
Ethnicity	White – 37%	Mixed – 13%	Asian or Asian British – 17%
	Black or Black British – 17%	Chinese – 3%	Not disclosed – 7%

As in year one of the Design Ventura programme, 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 9 schools)
- GCSE Design and Technology – Graphics (students from 8 schools)
- GCSE Design and Technology – Resistant Materials (students from 6 schools)
- GCSE Design and Technology – Textiles (students from 3 schools)
- Key Stage 3 Design Technology (students from 9 schools)
- GCSE Business Studies/Applied Business Studies (students from 2 schools)
- Engineering Diploma (students from 2 schools).

Teacher profile

30 teacher responses were received for Wave 1 (compared to 40 in year 1); 21 were received for Wave 2 (compared to 10 in year 1). Although the number of teacher participants in wave 1 is less than the previous year, more of them (19) went on to participate in wave 2 of the survey than did previously (there were two new teachers joining the survey in Wave 2). In addition there were 20 teacher participants in the Virtual Ventura survey.

Activities at the Design Museum

Overall ratings for the Design Museum were positive with 70% of students rating this as good or very good (Figure 1). The trend was similar for each year group. A quarter of the students gave a rating of OK, which suggests that improvements could be made.

Figure 1
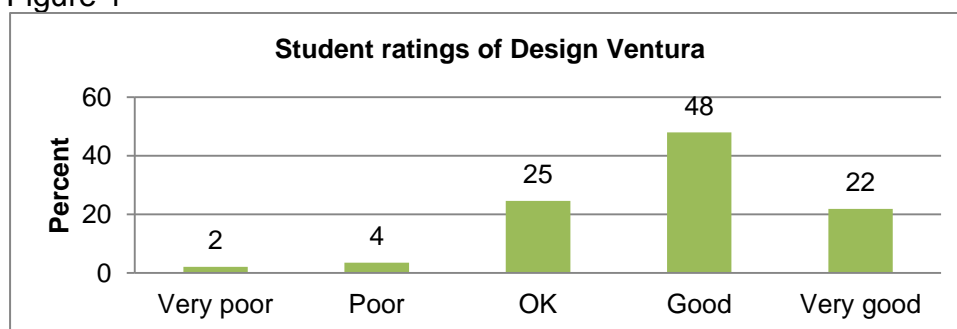
N=435

Comparisons were made to explore if there were differences in ratings according to gender and ethnicity. No significant differences were found. Furthermore, students appeared to enjoy the individual sessions equally, with no discernable differences evident between session ratings (see page 19).

The survey invited students to give written comments on what they liked best about working on Design Ventura. Popular features of the programme were the visit to the Design Museum, working as a team and the process of designing products, e.g. drawing, and making models and prototypes.

Students were also invited to comment on what they liked least about Design Ventura. Limitations on time and the amount of money they were able to spend on their design materials were frequently mentioned, along with not being able to choose who they worked with and problems with team disagreements. Furthermore, a number of students did not enjoy presenting and pitching, researching initial ideas, the financial side of the activity and the amount of writing involved. However, many wrote that there was nothing about Design Ventura that they did not like.

Improving enterprise and creativity skills

Students were asked whether they perceived that participating in the Design Ventura project had improved their ability to design or improved their business ability (see Table 2 below). The majority responded positively saying that their abilities had increased. The biggest gains reported were in ability to respond creatively to a design brief, where almost three-quarters (72%) felt that this had increased. Ability to understand the business side of design and to make good business decision were also skills which students reported had improved (68% and 63% respectively), as was the ability to communicate ideas (66%).

Perceptions about increases in generic and enterprise skills such as team working and leadership might have been influenced by some of the problems students referred to in their comments, namely team disagreements. Ability to lead others was the only area where less than 50% of students reported a definite increase in skill. However, opportunities for leadership were constrained (i.e. not all tem members could be leaders).

Table 2: 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	18	72	9	483
Ability to communicate design ideas	25	66	7	479
Ability to understand the business side of design (e.g. costs, marketing, profits)	22	68	8	432
Ability to work in a team	34	59	6	463
Ability to lead others	45	44	10	467
Ability to make good decisions in a business	26	63	9	463
Ability to present ideas to others in public	33	58	8	458

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.

Approximately half of learners report increased general self-confidence, raised ambitions about what they expect to achieve in their studies and careers, and improvements in their willingness to take on new tasks (see Table 3). However, more young people felt that their general self-confidence had remained the same (48%) than increased (46%).

It is also notable that although 56% report increased ambition in what they expect to achieve in their study, only 44% report increased ambition in what they expect to achieve in their career. This might reflect student awareness of structural limitations, such as a lack of available career opportunities in the current economic climate, despite their best efforts to achieve more in their studies, although this was not something that the survey explored.

Table 3: Has participating in the Design Ventura project improved your level of confidence and your ambition? (%)

	Remained the same	Increased	Not sure	N
General self-confidence	48	46	5	481
Willingness to take on new tasks which I have not tried before	36	56	7	100
Ambition about what I expect to achieve in my studies	34	56	9	100
Ambition about what I expect to achieve in my career	38	46	15	100

These data were interrogated to see if differences were evident according to year group, gender and ethnicity. No significant differences were found.

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, data from 101 students have been included in the analyses which follow; 60 students from Wave 1 and 41 students from Wave 2.

	Wave		Totals
	Wave 1	Wave 2	**Totals**
Student A	30	20	50
Student B	30	21	51
Totals	60	41	101

The capabilities of these students were assessed on a scale of 1-5, where '1' means very weak and '6' means very strong. These data were treated as scores so that averages could be calculated for each skill level.
In total, 28 students appeared in both surveys and their scores were used in statistical tests for significance. The results of those tests 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 skills, as perceived by teachers, across the range of design and business/enterprise capabilities explored[1].

Figure 2 illustrates the gains in skill levels. Although all gains were highly significant, the greatest gains appear to be in:
- Awareness of product marketing and target audiences[2]
- Knowledge and understanding of the design industry[3].
- The smallest gains, but significant gains non-the-less, appear to be in:
  - Assessing materials, production techniques and manufacturing considerations
 - Communication skills.

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[1] Related t-tests for each of the skills listed were highly significant ($p<0.01$).
[2] Shows a step change of +0.8 between pre and post programme scores
[3] As 2 above.

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

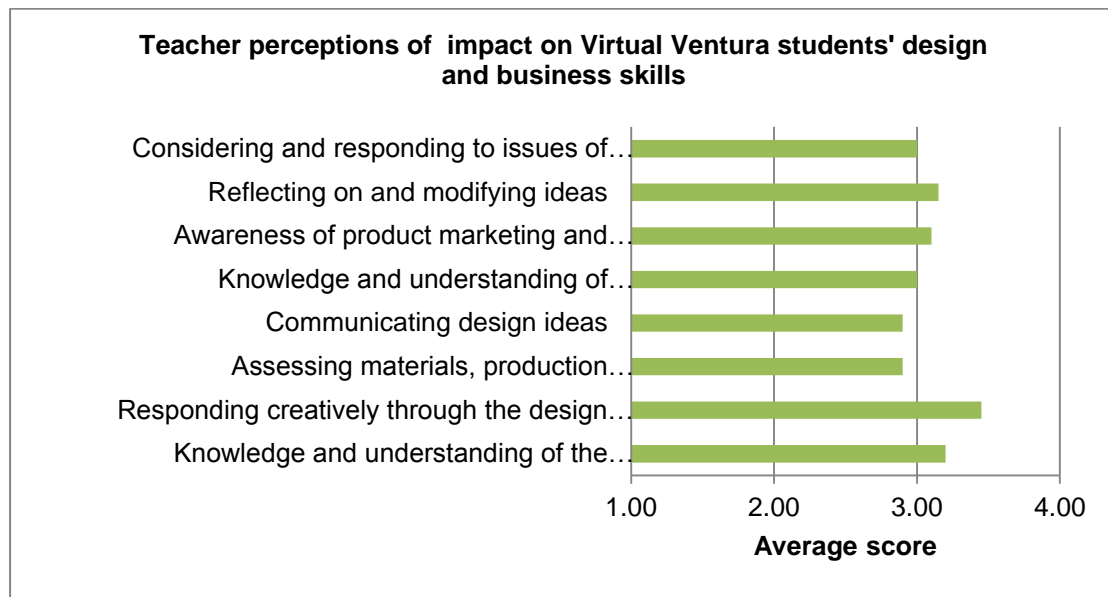**Teacher perceptions of students' design and business skills**
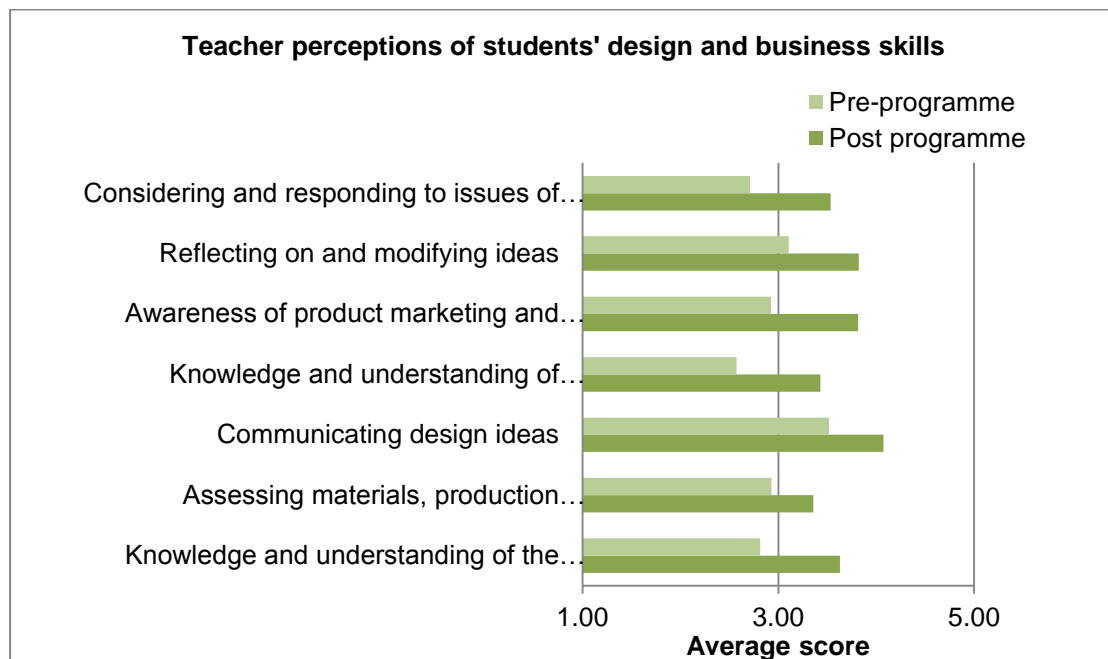
(1= very weak; 2 = weak; 3 = average; 4 = strong; 5 = very strong)

These data suggest that the Design Ventura experience 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 and we do not know what other experiences students have been exposed to and whether their skills have benefited from other learning in other lessons. 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 who participated in Virtual Ventura were not asked to monitor students pre and post programme, instead they were asked to assess the impact that 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.

Between 65 and 85% 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. For consistency, the mean scores are presented in Figure 2b below to illustrate perceived impact. According to teachers, Virtual Design Ventura had on average 'good' impact on a range of design and business skills.

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Figure 2b: Teacher perceptions of impact on Virtual Ventura students' skills

Teacher perceptions of impact on Virtual Ventura students' design and business skills

| Skill	
Considering and responding to issues of…	
Reflecting on and modifying ideas	
Awareness of product marketing and…	
Knowledge and understanding of…	
Communicating design ideas	
Assessing materials, production…	
Responding creatively through the design…	
Knowledge and understanding of the…	

Average score (1.00 to 4.00)

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

General capabilities

Figure 3 presents data showing gains in general capabilities as measured after participation in the Design Ventura programme. The same procedure was applied to these data for statistical testing[4].   The results also show highly significant gains in skill levels. 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.

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

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

Teacher perceptions of students' general capabilities
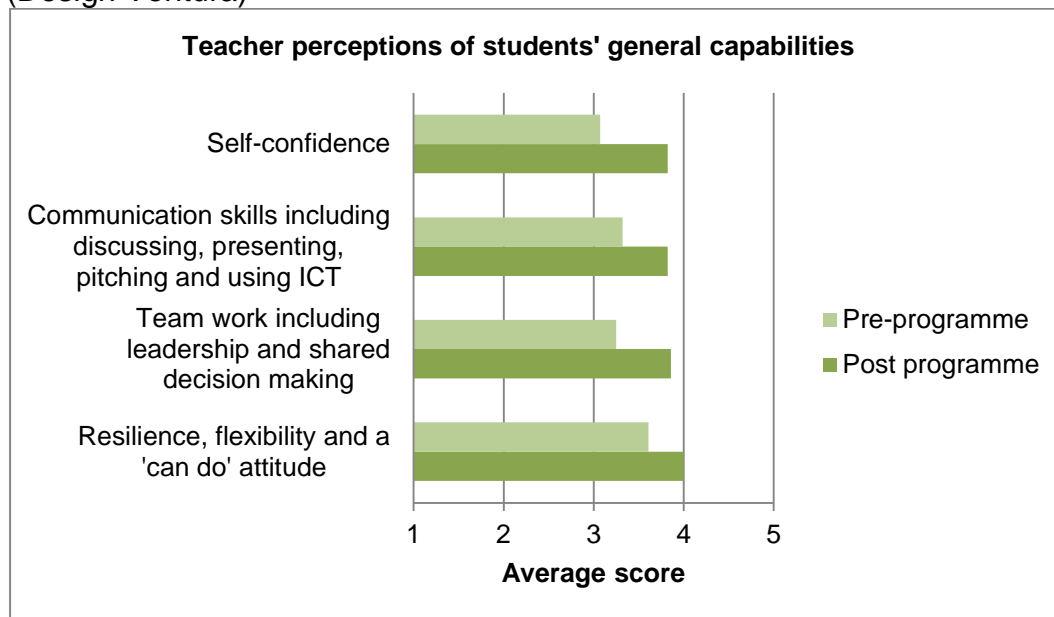
(1= very weak; 2 = weak; 3 = average; 4 = strong; 5 = very strong)

Teachers judged that the impact on the self-confidence of students was relatively high.

As before, teachers who participated in Virtual Ventura were asked to assess the impact that the programme had on the general capabilities of students. Between 75 and 80% 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.

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

Teacher perceptions of impact on Virtual Ventura students' general capabilities
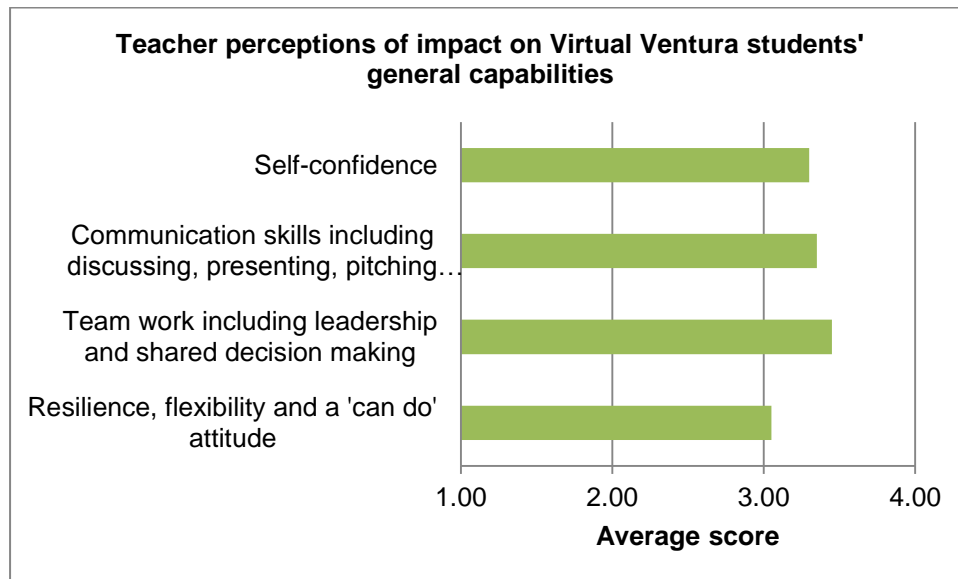
(1= low impact; 2= some impact; 3 = good impact; 4 = very good impact)

Overcoming barriers

Figure 4 shows that most students (55%) agree that Design Ventura has encouraged them to believe that they can overcome barriers to their ambitions, while 11% believe the opposite. Just over a third, however, report that they are unsure about this.

Figure 4: Student perceptions in relation to overcoming barriers

Overcoming Barriers
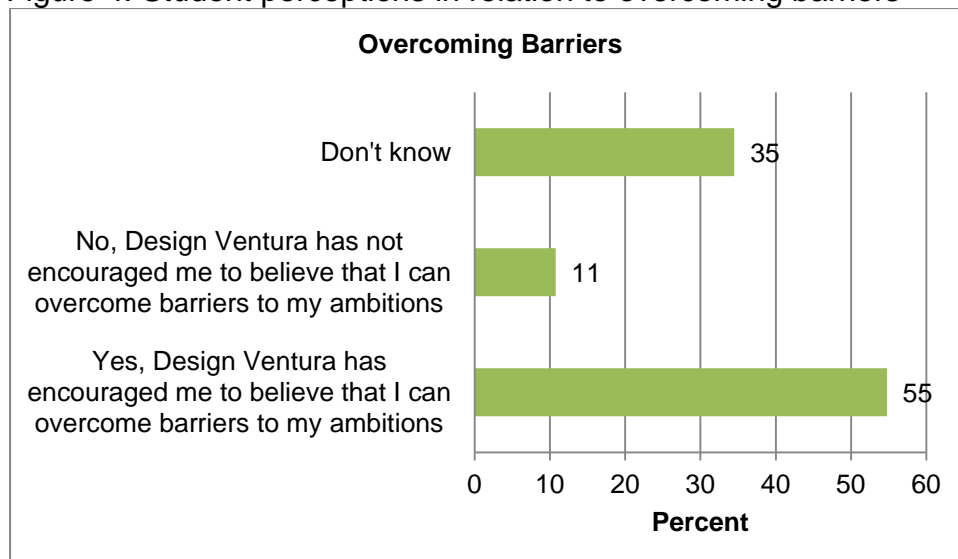
N=400

Statistical tests on the data revealed a significant association between year group and overcoming barriers[5]. These data suggest that a higher proportion of year 10 students (14%) reported that Design Ventura had not encouraged them to believe they could overcome barriers to their ambitions compared to year 9 students (6%). The survey data does not enable us to comment on how or why this association occurred.[6]

Similar comparisons were made to explore differences according to gender and according to ethnic group and no other significant associations were found.

Increasing understanding of business within the design industry

The data from the Wave 1 teachers' survey suggests that most students had relatively little prior experience of key features of the Design Ventura approach. A third of teachers (33%) reported that their students had not benefited from face to face contact with practising designers prior to Design Ventura. However, a similar proportion (37%) reported being able to bring some of their design students into contact with practising designers at some point in their teaching. Just over a quarter (27%) reported that there had been between one and two opportunities for some of their students to learn directly from practicing designers in the last two years.

Similarly, just over half of the teachers (53%) reported that their students had not had face to face contact with business people, compared to 20% who had been able to provide such an experience at some point. 17% reported that there had been one or two opportunities for some of their students to learn directly from business people in the last two years.
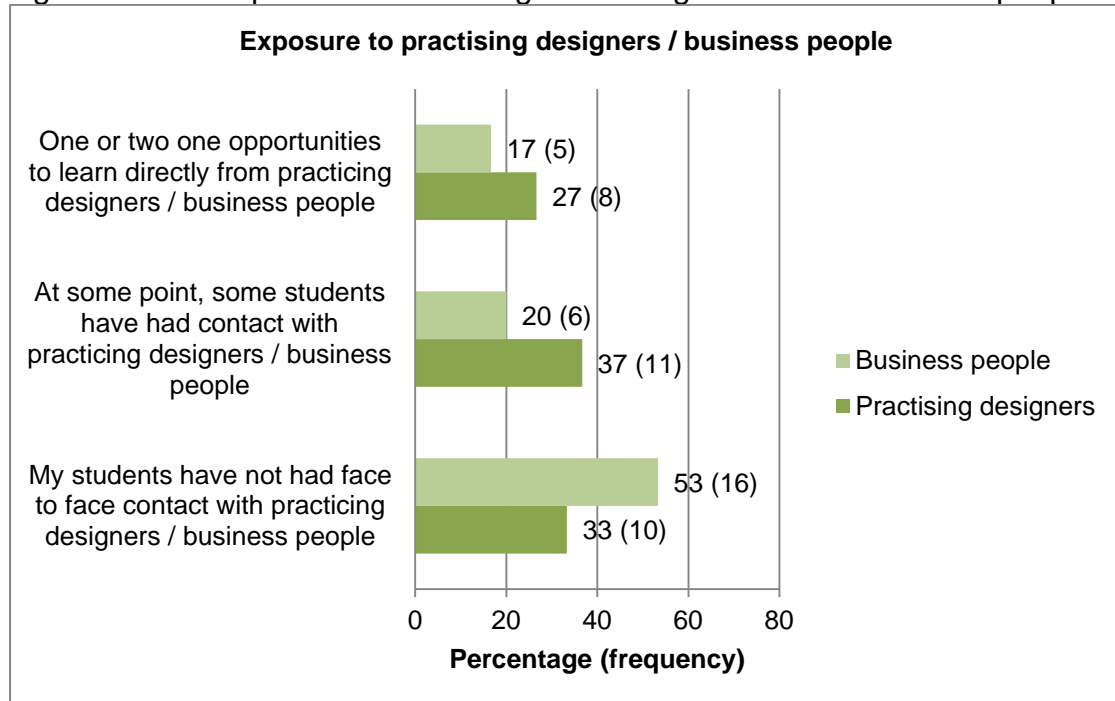
These data should be treated with caution as numbers are quite small. For this reason frequencies are also presented (in parenthesis) in Figure 5 below.

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[5] Chi square statistics showed a significant year group association ($p<0.05$).
[6] This finding is consistent with research that shows that aspirations are lowered for some students over the course of their secondary education.

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

Exposure to practising designers / business people

Category	Business people	Practising designers
One or two one opportunities to learn directly from practicing designers / business people	17 (5)	27 (8)
At some point, some students have had contact with practicing designers / business people	20 (6)	37 (11)
My students have not had face to face contact with practicing designers / business people	53 (16)	33 (10)

Percentage (frequency): 0, 20, 40, 60, 80

These data demonstrate that Design Ventura has increased the involvement of design and business professionals in learning for those teachers and students who participated. In particular, some two thirds of students of students obtained a first-hand encounter with design professionals while about one half obtained a first-hand encounter with business people. This professional contact was valued by students (see Fig. 7) and may have had a positive influence on students' perceptions regarding their increased understanding of the business and design industry (as reported in the section on student skills previously pages 11 and 12).

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.

All 21 teachers reported that they would like to participate in Design Ventura again and all but one reported that they would look out for other opportunities to combine enterprise and design in their teaching. These data are presented in Table 5.

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Table 5: In future, will you teach further projects that bring together enterprise and design? % responses (frequency in parentheses)

	Agree	Disagree	Don't know
I would like to participate in Design Ventura again	100 (21)	0	0
I will look out for other opportunities to combine enterprise and design in teaching	95 (20)	0	5 (1)
I plan to use the web version of Design Ventura in the future	43 (9)	19 (4)	38(8)
It is unlikely that I will do this kind of project again	10 (2)	71 (15)	0

N=21

A similar trend is evident in the Virtual Ventura teachers' data where all 20 of the teachers surveyed reported that they would like to participate in Design Ventura again and would look out for other opportunities to combine enterprise and design in teaching. 55% said that they planned to use the web version again and 35% said that they planned to do the non-virtual version of Design Ventura in the future.

Both Wave 2 teachers and Virtual Ventura teachers were asked about barriers to the teaching of enterprise and design together (Figure 6). Their responses suggest that lack of time is perceived as a major barrier among participants. However, it must be noted that almost a quarter of the 21 Design Ventura teachers (Wave 2) reported that there were no barriers. Another variation in responses between the two teacher cohorts is the fact that 26% of the Virtual Ventura teachers report that the programme does not engage students compared to only 5% the Design Ventura teachers.

Figure 6: Teachers' perception of barriers to take up of Design Ventura
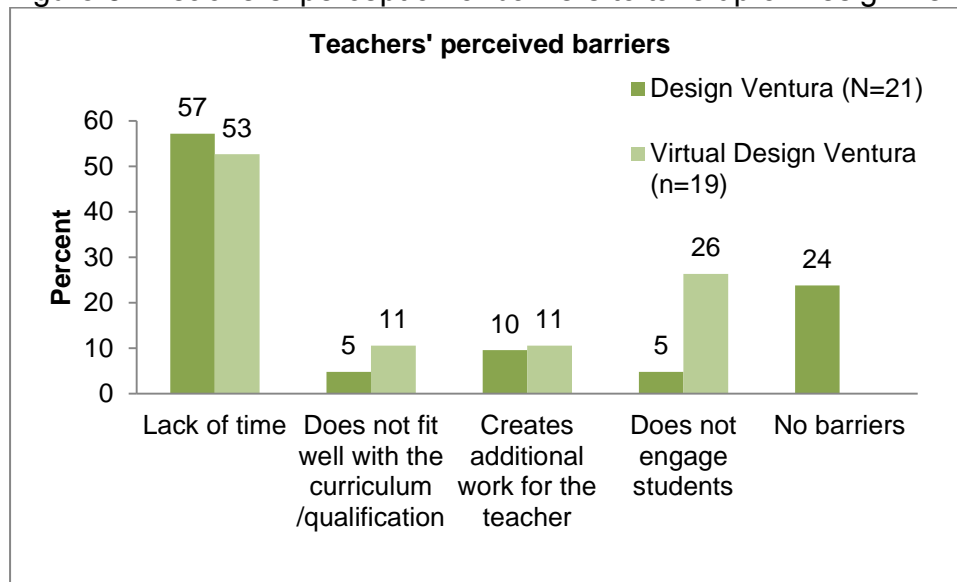
Providing a learning experience of the highest quality

As demonstrated previously (Figure 1), the majority of students (70%) were positive in their judgement regarding their overall experience of Design Ventura.

Students were also 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. These data are presented in Figure 7 which shows that around two thirds (62 -70%) of students judged these sessions to be 'good' or 'very good'. Between a quarter and a third (25-33%) gave a rating of 'okay' which suggests that some improvements could be made.

Working with a teacher and working with a practising designer were rated most favourably according to the numbers rating them as good or very good.

Figure 7:
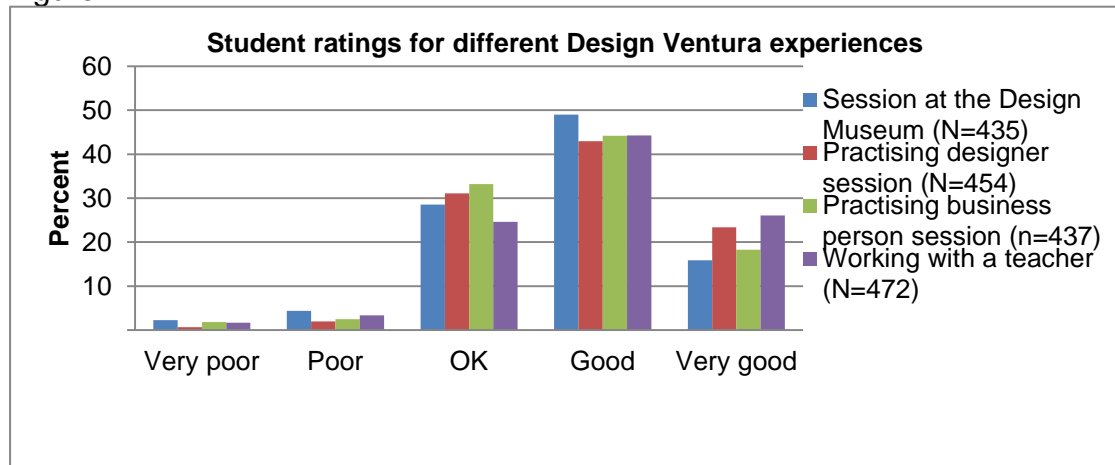
Qualitative student comments

The survey invited students to give written comments on what they liked best about working on Design Ventura. Popular features of the programme were the visit to the Design Museum, working as a team and the process of designing products, e.g. drawing, and making models and prototypes.

Students were also invited to comment on what they liked least about Design Ventura. Limitations on time and the amount of money they were able to spend on their design materials were frequently mentioned, along with not being able to choose who they worked with and problems with team disagreements. Furthermore, a number of students did not enjoy presenting and pitching, researching initial ideas, the financial side of the activity and the amount of writing involved. However, many wrote that there was nothing about Design Ventura that they did not like.

Outcomes for teachers

Prior experience

Prior teaching experience was varied, although most had some experience of teaching students to complete the entire design and enterprise process (e.g. generating ideas, research, design development, creating a prototype for manufacture and communication).

Less than half of the teachers surveyed in Wave 1 (40%) reported that they had extensive experience compared to a third (33%) who said they had occasionally taught students to complete whole process. Just under a quarter (23%) said they had taught students part of the process and 3% had no experience of teaching any part of the design and enterprise process.

Teacher capability

In Wave 1, teachers were asked to judge their own capability to teach enterprise with design. Despite their various levels of experience, the majority (69%) reported their existing capability to teach enterprise together with design as good (53%) or very strong (13%).

Both Wave 2 teachers (N=21) and those participating in Virtual Ventura (N=20) were asked to indicate their level of agreement with statements about what they had gained from taking part in the programme. Their responses suggest that many found the programme very helpful in developing a better understanding of how to engage students in learning about enterprise and how to teach enterprise and design together and of the resources and people that could support it. Responses are presented in Table 6.

Table 6: Level of agreement regarding gains from participation in Design Ventura (%)

	Design Ventura (N=21)			Virtual Ventura (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	95		5	80		20
A better understanding of how to plan and teach enterprise and design together	76		24	85		10
A better understanding of what resources and people can be used to support the teaching of enterprise and design	100			80	5	15

Impact value

Finally teachers were asked to rate the value of particular features of Design Ventura. Most teachers valued or highly valued working to a real brief, combining design and enterprise learning and competing with other schools. Those who experienced Design Ventura also highly valued activities at the museum and team working.

These data are presented in Table 7.

Table 7: Value ratings for various features of Design Ventura/Virtual Design Ventura (% rated highly or very highly)

	Design Ventura (N=21)	Virtual Ventura (N= 20)
Working to a real brief	100	100
Activities at the museum	100	Not asked
Access to designers	66	Not asked
Access to business people	76	Not asked
Competing with other schools	86	80
Team work	90	Not asked
Combining design and enterprise learning	90	90

In addition, most teachers in Wave 2 judged that Design Ventura's use of the Design Museum had a good or high impact upon student learning. For example, most teachers judged that the following features had a good or high impact.

- The exhibition (90%)
- The museum workshop using the handling collection (95%)
- The visit to the museum shop (100%)

Most Wave 2 teachers also judged that the on line resources from www.ventura.designmuseum.org had a good or high impact (71%) and also many judged the CPD event at the museum as having a good or high impact (67%).

Virtual Design Ventura Website

Virtual Ventura teachers were asked an additional set of questions about the value of some of the elements of the Virtual Design Ventura website. Table 7a below presents these data. It seems that blogs and the Teacher forum were considered to have no value by some and lower value overall than other features. In contrast, a high proportion of teachers (between 70 and 90%)

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rated the case studies, teaching and learning resources and short films favourably (as valuable or highly valuable).

Table 7a: Valuation of elements of the Virtual Ventura website (%)

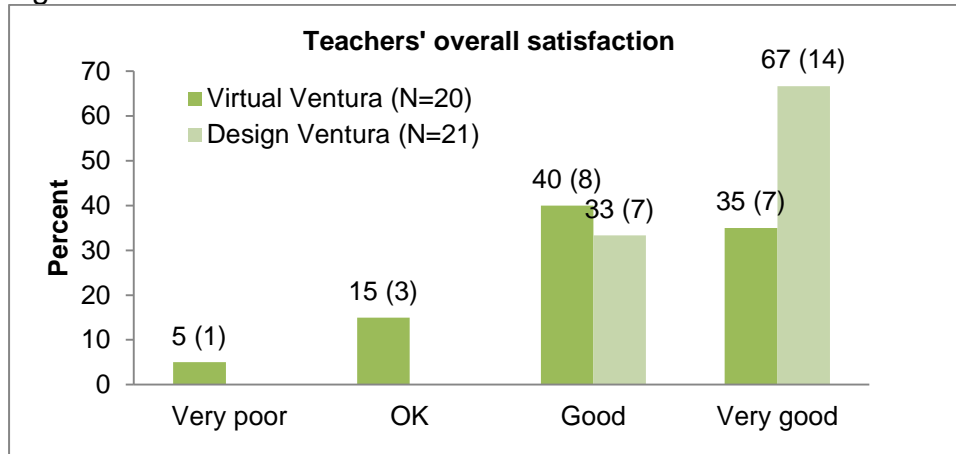|	No value	Some value	Valuable	Highly valuable	Don't know
Blog	15	45	15	5	20
Short films		20	40	30	10
Expert tips		30	50	15	5
Teacher forum	30	40	20	10	
Teaching and learning resources		25	50	25	
Case studies		10	60	30	
Project plans		25	50	20	5

N=20

Teachers' overall experience

87% of **all** teachers participating in the Design Ventura programme rate it as good or very good (that is, 36 out of all of the 41 teachers involved in either Design Ventura or Virtual Design Ventura).

One of the teachers participating in the Virtual Ventura programme however felt it was very poor. 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

Teachers' overall satisfaction

Legend:
- Virtual Ventura (N=20)
- Design Ventura (N=21)

Data labels (Percent):
- Very poor: 5 (1)
- OK: 15 (3)
- Good: 40 (8), 33 (7)
- Very good: 35 (7), 67 (14)

Design Ventura teacher comments

Wave 2 teachers were invited to give written comments on how Design Ventura could be improved and 6 teachers took this as an opportunity to give positive feedback. For example:

'I think the whole project has been very well organised and has really motivated the pupils who participated. I am to allow more pupils to participate next year.'

'*Fantastic opportunity for all students to take part in – an enterprising project.'*

'It's a great way for students to understand the design process as well as costing the product.'

However, suggestions for improvements were made. Three teachers felt that more time was needed - two of these suggested extending the deadline, e.g. to January or late December. Two suggested more available help and resources on how to cost, one suggested more time with real designers but appreciated that this might be expensive, and one mentioned a continual difficulty with on-line resources which had slowed down the pace of the activity.

Virtual Ventura teacher comments

Comments from the Virtual Ventura teachers also suggested improvements. These included the provision of additional videos from designers or design studios for example manufacturing videos / or environmental case studies about design. Another commented that students responded well to the initial video and so suggested a video each week with a more structured approach.

There was also a call for more support for new schools participating in the programme and for resources to be made available by other means than

social networking sites as some schools had a policy preventing access to such sites.

One teacher commented:

'Students are disappointed with not being allowed to enter all groups' work, they would each like recognition for their hard work. I have awarded bronze, silver and gold awards to the class for their work, with gold being given the opportunity to submit the work for the Ventura project.'

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4: Conclusions

Impact

The 2011 evaluation has provided evidence which demonstrates that the Design Ventura programme has provided 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. The evidence reported demonstrates the perceived efficacy of the project in achieving its stated aims and anticipated outcomes, where 87% teachers and 70% of students rated their experience of the project as good or very good.

Evidence in relation to learning outcomes for students and teachers provides strong support that the 2012 Design Ventura programme has achieved its aim of improving enterprise and creativity skills amongst young people. A target of 60% was set as the outcome indicator for young people to experience an increase in enterprise skills and creativity. With between 63 and 72% of students reporting increases in the range of enterprise and creativity skills listed it is clear that the target has been achieved for all skills listed with the exception of teamwork and leadership skills. Teamwork skills just missed the target with 59% of students reporting gains. Fewer reported gains in leadership (44%), however it must be acknowledged that when working in teams, not everyone will have the opportunity or desire to lead.

According to teacher perceptions of students skills pre and post programme, the programme has helped students to *significantly* improve their design and business enterprise skills. Monitoring by teachers suggests that Design Ventura added most value to learning about product marketing and target audiences; this domain has been identified by Sebastian Conran as crucial for business viability of design and as a focus of this programme.

The programme has also impacted on attitudes and attributes, there were significant increases in self confidence and ambition. According to teachers' perceptions, there were significant gains in student self confidence following participation in Design Ventura. In addition, 46% of students believed that their general self confidence had increased and 56% reported increased willingness to take on new tasks they had not tried before. It seems that the programme has had a positive impact on aspirations too, with 46% of students reporting increased ambition about what they expected to achieve in their career. Furthermore, the programme has also impacted positively on educational aspirations: 56% of students report increased ambition about what they expect to achieve in their studies. However, these outcomes fall short of the ambitious 70% target. On the other hand, it was anticipated that 50% of learners would perceive a reduction of barriers to their success or achievement and this has in fact been exceeded with 55% of students reporting positive impact in this area.

There is supporting evidence to show that Design Ventura has increased knowledge and understanding of business within the design industry. For example, Design Ventura has increased the involvement of design and business professionals in learning for those teachers and students who participated. In particular, some two thirds of students obtained a first-hand encounter with design professionals while about one half obtained a first-hand encounter with business people. This professional contact was valued or highly valued by around two thirds of students and teachers.

Around 80% of all participating teachers reported that they found the programme very helpful in developing a better understanding of how to engage students in learning about enterprise and how to teach enterprise and design together and of the resources and people that could support it.

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 and combining design and enterprise were rated highly, or better, by at least 90% of teachers.

Virtual Design Ventura

Virtual Ventura was successful at attracting schools and students: 2025 students participated in Virtual Ventura in 2011 whereas 912 registered to participate in 2010.

Between 65 and 85% 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. Virtual Ventura was judged by teachers to have, on average, 'good' impact on all of the business, design and general capabilities targeted.

All 20 of the teachers surveyed reported that they would like to participate in Virtual Design Ventura again and would look out for other opportunities to combine enterprise and design in teaching. 55% said that they planned to use the web version again and 35% said that they planned to do the non-virtual version of Design Ventura in the future.

Teachers perceived slightly greater barriers to success with Virtual Design Ventura as compared to Design Ventura. 11% (as compared to 5%) reported that it did not fit the curriculum well and 26% (as compared to 5%) reported that it did not engage learners.

100% of teachers participating in Design Ventura reported their overall satisfaction as good (33%) or very good (67%) an impressive performance that exceeded the target of 85%. Good or very good satisfaction for teachers participating in Virtual Ventura was high at 75% but lower than for Design Ventura.

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About 40% of the teachers participating in Design Ventura expressed an interest in participating in Virtual Design Ventura which suggests that, over three years, the programme will have created a considerable market for Virtual Design Ventura.

Qualitative comments suggest that teachers valued the resources that were available through Virtual Design Ventura, particularly the video.

Sustainability

The Design Museum has sustained participation in Design Ventura which at 1165 this year is well above the 800 per annum planned. Participation in Virtual Design Ventura has more than doubled at 2025 (912 in 2010). Feedback on the experience of Virtual Design Ventura suggests that the programme is judged by teachers to have considerable impact upon the targeted learning outcomes. As Virtual Design Ventura is a relatively sustainable programme this implies that, in the future, it may be able to carry forward the benefits of this programme.

Expertise and experience have been built up in schools, with the Design Museum educators and with design professionals and business volunteers. The Design Ventura site now offers an extensive resource bank. Many of the teaching and learning resources have been revised and extended this year. The web resources were rated as good or very good by 70% of teachers.

Over 50% of teachers participating in Design Ventura and Virtual Design Ventura report that lack of time is a barrier to participation.

5: Recommendations

1. The programme could be developed to do more to address those learning outcomes where impact, at least according to learners, was relatively weaker, for example, leadership and general self-confidence. 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.

2. It would be useful to know why the impact of Design Ventura varies between students. We know that for some students there are particular features of Design Ventura that were not attractive, for example, limitations on time and the amount of money they were able to spend on their design materials, along with not being able to choose whom they worked with and problems with team disagreements. A number of students did not enjoy: presenting and pitching, researching initial ideas, the financial side of the activity and the amount of writing involved. Further research, for example, qualitative interviews with teachers or students might explore why, for example, the aspirations of some students, but not others, were raised. This in turn could inform the way that teachers targeted or taught Design Ventura in the future.

3. Impact on ambitions for success in education were significant but below target. There is a concern on the part of some teachers that Design Ventura does not fit GCSE assessment criteria perfectly and this may limit take up of Design Ventura at key stage 4. There may be scope to develop variants which would tailor Design Ventura better in relation to GCSEs and might therefore connect it better to academic achievement.

4. Meeting the needs of teachers and students through Virtual Ventura rather than Design Ventura is contains some challenges. Development work could be undertaken to ensure that that teachers understand what Virtual Ventura offers (and what it does not offer) and that there are ways that they can obtain support (perhaps from more experienced schools) about how to use Virtual Ventura successfully. Thought should be given to encouraging teachers and students to make greater use of the communications potential of the website to gain support and share learning (while at the same time preserving appropriate levels of internet security and protection).

5. Research in the final year of the programme could focus on how to make the Virtual experience as good as possible.

6. The Design Museum may want to consider ways in which the experience, enthusiasm and good will that have been built up with teachers, volunteers and learners might be shared and sustained. For example, there may be opportunities through Virtual Design Ventura or through successor programmes to enable participants to share their experiences or to participate further or to extend their participation.