

REPORT

AIM FOR THE SKY

NORTH LINDSEY COLLEGE

Aim For The Sky

This evaluation report examines the impact of 'Aim for the Sky', an aviation programme designed to give participants the skills and knowledge needed to carry out aircraft handling.

The project also focused on communication, leadership, team-building and career opportunities within the aviation industry.

It targeted aspiration, particularly among male students although female students were not excluded.

The project aimed to offer opportunities to students from Year 9 – 13 and was a result of a partnership between University Campus North Lincolnshire (UCNL), North Lindsey College and Trent Valley Gliding Club.



Aim For The Sky

The project featured presentations in engineering, aircraft organisation theory, meteorology, navigation and flight training. Students were given the opportunity to fly in a glider and act as ground crew. Students were also supported and encouraged to make appropriate, independent decisions both on the ground and in the air. The activities were supervised by the experienced technical team at Trent Valley Gliding Club. Leadership skills training was also included in the project. The Red Arrows delivered a presentation during the project focussing on the job roles involved in the Royal Air Force and the skills associated with these.

NERUPI Framework

The project was intended to meet NERUPI Aim C:

Develop students' confidence and resilience to negotiate the challenges of life in higher education and graduate progression

For some students, there was also the potential to meet NERUPI Aim E:

Develop students' understanding by contextualising subject knowledge

Sample Information

All students taking part in the project in the Spring Term were targeted for the evaluation.

101 students completed pre-activity surveys and **91** completed post-activity surveys.

85 students completed both and could therefore provide comparison data.

More than half of the matched students were NCOP (**51.5%**).

The majority of the full Spring Term cohort were Year 12 and 13 students from North Lindsey College (**81.8%**).

The Year 12 and 13 students were studying a range of courses including Motor Mechanics, Painting and Body Spraying, Electrical Installation, and Sports related courses.

Participating students were mostly male (**78.6%**) with only 5% with ethnicity other than white British.



Mixed Method Approach

This evaluation included both quantitative and qualitative methods. Pre and post activity surveys were developed:

- **Pre-activity survey**

This provided a baseline of data around knowledge and aspiration centred on HE and careers. It also recorded the level of interest and knowledge about the aviation industry.

- **Post-activity survey**

Questions around specific skills, knowledge and attitudes gained during the activity were included in addition to the baseline questions. This survey included a comments field and a satisfaction grading.

- **Intercepts**

Short interviews (5 – 10 minutes) were conducted with students at intervals during the activity.

- **Stakeholder interviews**

10 – 20 minute interviews were conducted with stakeholders including event organisers and North Lindsey College Learning Support and Teaching staff.

- **Observation**

The Red Arrows presentation was formally observed by a member of the FORCE Evaluation Team.



The term 'positive impact', used in this report, refers to any pre and post activity matched individual, showing a positive movement. This could be for example from 'agree' to 'strongly agree' or 'disagree' to 'agree'. Conversely so for 'negative' impacts.

Key Findings



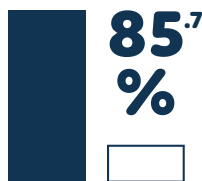
STRONG IMPACTS

on knowledge of higher education (**87%** learnt at least a little, **38%** learnt a lot).



87.4% OF STUDENTS

were satisfied or very satisfied with the overall programme.



85.7% OF RESPONDENTS

reported high levels of enjoyment with the programme.



POSITIVE IMPACTS

seen across all questions repeated across pre and post surveys.

The greatest **positive impacts** were seen on:

Awareness of aviation careers (**58%** of students showed positive impact)

Clarity around future goals (**52%**)

Awareness of aviation career routes (**49%**)

Learning to Fly

"It was good being up in the air. There was a rush of adrenaline. Really enjoyable. I would say to other people - go for it! I will go up again" (student intercept)

Many students reported that they enjoyed the practical aspects of the project, especially flying in the glider. During the intercepts, some students reported that although they had an interest in aeroplanes, aviation and the history of flight, they had very little prior knowledge of the industry. Some were 'adventurous' and one had tried skydiving but none had experienced gliding.

In the comments field of the survey, the knowledge and skills gained relating to aviation were by far the most common theme, reported by around one third of students. This table highlights the satisfaction levels with the practical and technical aspects of the course:

Improved knowledge and skills in aviation

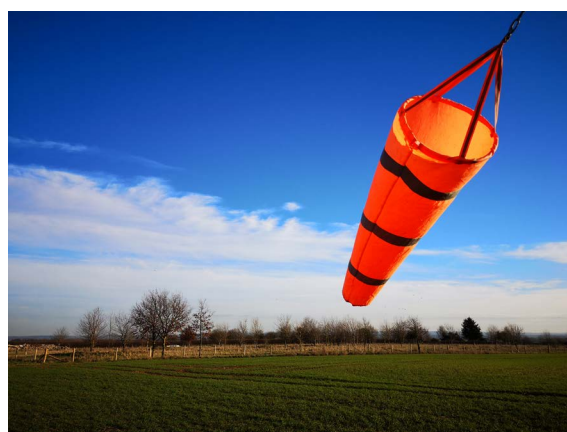
Agree / Strongly Agree

Knowledge of aircraft and flying	90%
Flight practical pre-flight checks, controls, launch, winch	89.8%
Flight theory forces, surfaces, movement, airflow	88.6%
Engines	84.1%
Flying practical setting up airfield for launch	84.1%
Navigation	77.3%
Meteorology	69.3%

Students also provided positive feedback on the Red Arrows presentation, stating that it was a great opportunity to find out more about the service. Some attendees were interested in RAF careers, although not as pilots. They reported that they were interested to learn about the variety of support roles. The evaluation team's observation of this highlighted high levels of student interest and engagement, links to attainment in Maths and the opportunity for students to hear the story of the presenter's determination to succeed in his profession as an RAF pilot.



Aim for the Sky appeared to stimulate interest in and enjoyment of both the practical and theoretical skills involved in flying.



Personal Development Skills

“No one would have thought that I could do this” (student intercept)

During the intercepts, stakeholders and students reported that the project provided a unique opportunity for them to fly in a glider and although it was ‘nerve-wracking’, it was a positive, enjoyable experience which improved the confidence of participants.

‘**Leadership**’ was the most highly rated skill. Levels of agreement in skills developed in communication, problem solving and ‘**confidence in my abilities**’ were also measured and the results are provided in the table below:

Personal development skills	Very Satisfied / Satisfied
Leadership	78.9%
Communication	78%
Problem Solving	78%
‘Confidence in my abilities’	71%

In addition, students made positive comments around developing teamwork skills, confidence, making independent decisions and overcoming a fear of heights. For example, under the guidance and supervision of experienced members of Trent Valley Gliding Club, students were encouraged to make decisions about health and safety and to take the controls while in the air.

Some students’ feedback said that they appreciated this opportunity. One stakeholder linked this ‘taking responsibility’ to students gaining awareness of the consequences of their actions:

“I’ve had nothing but positive feedback. Apart from the good structure and organisation [the students were] pushed out of their comfort zone. Three students have already used their club membership” (stakeholder interview)



Personal development skills were a key feature of the ‘Aim for the Sky’ project with impact across all measures.

Taking the Controls - Higher Education and Careers

"I came back [to the Aim for the Sky project] for more flying. I have found a grant to support my flight training and membership. I loved it and would support people to come. Great work experience" (student intercept)



There were some significant results from enquiries around skills, knowledge and attitudes in the area of HE and careers.

During the intercepts, students reported gaining knowledge about a range of careers in the aviation industry. As a result of the project, one student found a work experience placement at a local airport and others expressed interest in this area. One stakeholder observed that Year 13 students were more likely to express an interest in the career opportunities or higher level apprenticeships in aviation.

34.1%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

Students were asked if they understood **the different options and pathways available after school/college**. **91.2%** of matched students agreed with this statement.

44.7%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

More than twice as many students 'strongly agreed' with the statement **'I understand the career opportunities available to me after HE level study'** post-activity (**20.9%** compared with **8.9%**), with a **17.7%** gain in 'agree' answers in this field.

38.8%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

More than twice as many students 'strongly agreed' that they knew **which career to pursue** post activity (**41.8%** compared with **20.8%** pre-activity).

51.8%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

There were some striking and statistically significant results to the question **'I am clear about what I would like my future goals to be'**. More than three times as many students 'strongly agreed' with this statement post-activity (**34.4%** compared with **11%** pre-activity).

41.2%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

Students were asked if they understood **the benefits of studying at HE level**. It was **statistically significant** that the number of students answering 'strongly agree' more than doubled (from **10%** to **20.9%**) and increased by nearly a third for the answer 'agree' (from **43%** to **60.4%**).

44.7%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

Nearly four times as many students 'strongly agreed' with the statement **'I understand which entry requirements/grades are needed to study at HE level'** post-activity.

47.6%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

The students who **'knew how to pursue their chosen career'** had more than doubled post-activity (**34.4%** compared with **11%**).

49.4%
OF STUDENTS
SHOWED A
POSITIVE
IMPACT

Three times as many students 'strongly agreed' they were **'aware of the different routes into career related to aircraft and flying'** post-activity (**15.4%** compared to **4%** pre-activity).

57.6% of students demonstrated a positive impact to the question, '**I am aware of the different types of careers available to me if I study a course relating to aircraft and flying**'.

74.7% of students agreed that they were **aware of different routes into careers relating to aircraft and flying** and some connected their current thinking about careers with the new opportunities in aviation careers.

For example, some students on mechanics/electronic courses expressed an interest in this area. However, sports students were less interested in aviation related careers. Some students reported an increased interest in Forces careers as a result of the project.

Interest in aviation careers sees relatively little positive impact (**33%**) compared to other areas. However, this is still a substantial impact for what may be an unfamiliar field.

NCOP Response

44 NCOP and 41 non-NCOP could be matched having completed both pre and post activity surveys. **51.2%** of the total responses were from NCOP students.

Pre-activity, students were asked to respond to the question '**I understand the benefit of studying at HE level**'. **17%** of NCOP students 'strongly disagreed' with this statement. Post-activity, this reduced to **4.3%**.

NCOP students showed more positive impacts than non-NCOP students across 7/10 of the measures repeated across pre and post activity surveys. However, this was from a lower initial benchmark for NCOP students on all but one measure ('**interest in aviation**').

Response to studying aviation-related courses

NCOP students were marginally more interested than non-NCOP students in studying a course in aviation prior to the project. After the project more non-NCOP students reported that they were interested than NCOP. However, it is notable that the number of NCOP students reporting 'disagree/strongly disagree' to this question halved.

NCOP students showed a higher initial interest in studying courses in aviation prior to the activities. Post-activity, non-NCOP students showed a higher level of interest. Should this be addressed within future programmes?

Other significant positive impacts for NCOP students

- In response to the question '**I understand the career opportunities available to me after HE level study**', NCOP students demonstrated a **52%** positive impact compared with **37%** non-NCOP.
- '**Awareness of aviation career routes**' had a **57%** positive impact for NCOP students and a **42%** positive impact for non-NCOP students.

Notably, non-NCOP students showed more positive impacts being '**clarity around future goals**', and '**understanding HE benefits**'.

Gender Difference

Male students showed more positive impacts than female students on all but one measure repeated across pre and post surveys ('**knowledge of careers relating to flying**'). There were only a few statistically significant differences between genders as only a low sample (20) of female students completed the post survey.

- '**I know what career I want to pursue**' shows a significantly more positive impact for male students than female students.
- '**Awareness of aviation career routes**' was the one exception where female students showed a slightly more positive impact than male students.
- Female students report significantly greater development of leadership skills than male students.
- Female students were significantly more likely than males to strongly agree that the presenter coordinator '**maintained my interest**'.



*Female participants demonstrated greater awareness of aviation careers post activity.
Could targeted work be done in this area?*

Age Difference

There was a relatively low sample size of just 19 Year 9 students matched with the pre and post activity survey.

Year 12 and 13 students showed more positive impacts than Year 9 across all measures repeated across pre and post surveys. The only statistically significant difference between the two groups (Year 12/13 collectively and Year 9) in this regard is on '**understanding of entry requirements for HE**' where **40%** of Y9s showed a negative impact; perhaps 'switching off' as this area may have seemed less relevant to them.

Interestingly, Year 9 students report higher initial benchmark levels of awareness and understanding of entry requirements for HE than Year 12/13 students, which may be an over-confidence in their knowledge base.

Year 9 students also show generally higher satisfaction levels with the coordinator and programme as a whole.

Year 9 students also reported greater development of personal or 'soft' skills (leadership, problem-solving, communication and confidence) than Year 12/13 students; we would suggest that this could be due to a lower initial skill base, although this was not measured.

Opportunities and Barriers

Some changes were made to the structure of the programme for Aim for the Sky. This was originally planned as four half-days for each cohort but changed to two full days. In addition, the course content changed and the engineering/aircraft design and build was removed due to the cost of materials. No negative comments were received regarding the organisation of the project. The organisers met the additional needs of a secondary school by organising a flight simulator as an alternative to flying in the glider due to inclement weather on the day. The flight simulator may become a feature of future projects and this would add value to the current provision. This cohort of students have since returned to the airfield and have flown a glider.

An overwhelming majority (around three quarters) of the students made positive comments in the survey comments field. Nine made a negative comment regarding the project content. Please see table below for details:

Positive comments	Number of students
Interesting / Informative	14
Fun / Exciting	14
Enjoyed learning	6
Presenters / Coordinators engaging	3
New / Different	3

Negative comments	Number of students
Theory content was slow or they were bored in parts	1

Stakeholder interviews highlighted the high quality of the presentations but also the issue of the poor response to the classroom based activities from some students. It is important to recognise that some students reported that they enjoyed the classroom presentations but feedback suggested teaching in these areas could be differentiated to offer the best experience to less academic students. Positive responses to the 'hands on' activities was consistent amongst all respondents.

The post-activity survey also collected responses to the Aim for the Sky presenter/coordinators and the results are outlined below:

Statement	Agree / Strongly Agree
The Aim for the Sky presenter/coordinator delivered the activities clearly	92%
The Aim for the Sky presenter/coordinator was enthusiastic about the topic	90%
The Aim for the Sky coordinator maintained my interest during the activities	78%

It was reported that the students respected the skill and the commitment of volunteers at Trent Valley Gliding Club. They valued the opportunity to meet people from a wide variety of professional backgrounds and there was good interaction between the volunteers and students. They also performed well 'outside of the classroom' and it appeared that the project offered an opportunity for good partnership working between education and third party providers. Stakeholders at the gliding club also welcomed the opportunity to work with students. They were keen to explore potential further partnership working.

Conclusions

- Aim for the Sky appeared to stimulate interest in - and enjoyment of - both the practical and theoretical skills involved in flying.
- Personal development skills were a key feature of the 'Aim for the Sky' project with positive impacts across all measures.
- There were some significant results from enquiries around skills, knowledge and attitudes in the area of HE and careers.
- NCOP students showed a higher initial interest in studying courses in aviation prior to the activities. Post activity, non-NCOP students showed a higher level of interest. How could this difference be addressed within future programmes?
- Female participants demonstrated greater awareness of aviation careers post activity. Could targeted work be done in this area?
- Could the classroom-based activity be differentiated to meet the need of the full student group?



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