

Report on the 3rd Annual Youth Aviation Education Conference

Saturday April 17th 2010

Brooklands Museum, Weybridge, Surrey.

Over 60 people attended Brooklands museum for this successful conference. It was good to see some ongoing supporters as well as a number of new faces and organisations present. The museum made a wonderful setting and many attendees took the opportunity to look around and enjoy the engine runs of the Sopwith Camel and Demoiselle.

The following speakers presented:

**Brooklands Museum Education Departments
(Virginia Price & volunteer Peter Rickman)
www.brooklandsmuseum.com**

Brooklands museum has been a long time supporters of youth aviation and in particular the Build-a-Plane project. In addition they run a number of aviation themed days and school visits. These are tied closely to the schools curriculum and cover the full age range:

Infants school tours covering Key Stage 1 & 2. These are important for "catching them young!" Recent years have seen increased follow up at school and the museum offers a prize, the Ray Gifford Award for the school which makes the most effective use of this. Lee-on-Solent school were the winners of this last year.

The "Up Up and Away" events are a maths themed events for older children based around designing and testing parachutes.

They held a number of events for Science week of which the water rocket was probably the most well received! They are now seeking a suitable partner for next years activity, so anyone with a good idea for how that could run should contact them.

They also have an ongoing partnership with the University of Surrey, which focusses on school group visits on aerodynamics, including paper aeroplane design. Since these events started the university has seen applications for engineering courses rise by 50%.

They work as well with Brooklands college, who have a Jetstream being rebuilt for engineering training.

Outside of formal education the museum runs a number of family activities, leaflets and trails.

Their ongoing aims are to get more secondary school involvement, more follow up in class, and more activities specifically targeted at Scout groups.

Youth & Education Support (YES)

(Chairman Jon Chitty, Andre Faehndrich, Jim Gale , Leia Fee, Dave Hall)

www.flyers.co.uk

youthaviation.net

Jon outlined the aims and objectives of YES which can be summarised as:

The group aims to encourage young people to take part in all sorts of activities connected with aviation, through :-

- Aircraft building projects,
- Training in meteorology, navigation and airmanship,
- Air experience flights and Young Aviator events,
- Exhibits and activities for young people at aviation shows,
- Arranging talks and practical activity sessions for schools and youth groups,
- Developing curriculum and classroom support,
- Arranging aviation activity days for schools,
- Providing special flights for teachers,
- Maintaining an independent web-based aviation information centre for youngsters.

YES is a "non-geographical strut" of the LAA and is partly funded by the LAA Educational Trust, who this year will be contributing £5000 to support a variety of events throughout the year.

Andre then talked about some of the Young Aviators events recently organised, and resources which he had built up to support these, including packs of resources and activities.

Leia discussed the IT resources available to YES to support events such as the Interactive Whiteboard which has been very popular with young visitors to shows such as Fairford, and the new Youth Aviation wiki where organisations and individuals can get and share resources and information about youth and education involvement with aviation. (youthaviation.net). This included a summary of available grants amongst other things.

Dave Hall then discussed some of the other resources and activities YES offer, including the hugely cheap and popular foam plate gliders, aviation themed pen light building kits, DIY scaling rulers and protractors for teaching navigation and the R/T kits. These have all been on display and getting a lot of use at events over the past few years.

Army recruiting representative from Middle Wallop.

(Capt Nick Sharpe)

armyineducation.army.mod.uk

www.army.mod.uk/aviation

Capt. Sharpe gave an overview of the career options in Army flying, pointing out that they are one of few that can take on young people at 17 without minimum qualifications. He gave an overview of the wide range of careers which people might not always consider or know about including e.g. ground signallers, a form of mobile ATC

The recruitment team can fly in to events and take groups flying in addition to providing careers information and a stand of leaflets etc. They are based Middle Wallop and run events on site there too

And they even have a hot air balloon they can take to events!

Capt. Sharpe was keen to get across that they do as many events as they can so if you'd like them to attend one of your youth aviation events then get on and ask!

**The UK Youth Build Plane Project & RAeS/Boeing Schools Challenge
(Stewart Luck of B@P and Nick West (Boeing) partners from Devon, Yateley School, the LAA and RAeS.)**

www.raes.org.uk/cmspage.asp?cmsitemid=Careers_BuildAPlane

www.brooklandsmuseum.com/index.php?/education/build-a-plane-project

www.devonstrut.co.uk/#/bap2/4537559575

www.flyers.org.uk/Activities/BaP/BaP.htm

Stewart presented an overview of the first Build-a-Plane project, "Spirit of Brooklands", which started in 2002 with the aim of getting airborne for the centenary of flight in 2003.

This was so successful that Build-a-Plane 2 "Spirit of Devon Youth" followed close behind and has now flown all 36 kids involved in the build. Newly starting this year will be a winter programme following up on the skills learned in the BaP build, restoring an Aeronca Champ.

Nick West then spoke about the Boeing/RAeS Build-a-Plane Schools Challenge to which end Boeing have donated £60k/year with the intention of involving 2000 pupils aged 14-18.

These projects have a strong focussed on the business, admin and marketing side of the project with the aim being to sell the aircraft at the end to fund future builds. The actual building is being supported by local LAA struts.

The first two of these projects are now underway and the first will be appearing on static display at Farnborough and hopefully be flying by autumn.

One of the students from the first school, Yateley spoke enthusiastically about what she has learned in undertaking the project and how it has influenced her thinking about the choice of exam subjects.

The school is being supported by the Royal Berks Strut of the LAA who have supplied building help and guidance to the pupils and staff.

School activities & "Plane Talking".

(Chris Shaw)

website?

Chris spoke about these whole or half day themed Space/Aviation days run in conjunction with Discovery4 / YES.

These included topics such as "Return to the Moon", career days and activities such as ATC exercises.

They are all mapped to the core curriculum and included a selection of small projects/activities to act as a starting point to build enthusiasm and develop problem solving skills.

BMFA Education Material
(Keith Miller)
www.bmfa.org/education

The British Model Flying Association have one of the more structured "joined up" selection of activities across the age range from primary to higher education level.

They started developing their education programme when they realised that fewer and fewer young people were going into aero-modelling.

In response they developed a range of educational kits and teacher guides which could be marketed to schools and now have 14 area education coordinators across the country.

Something which was highlighted was the lack of manual dexterity of many young people today. "Making things" seems to have become so much less common that you find youngsters who can't effectively use pencils, rulers, tools like screwdrivers, spanners or knives to cut balsa wood with.

They run an annual competition for schools and youth groups at Duxford, currently sponsored by the Royal Navy.

RAF Career outreach
(Jon Chitty)
www.raf.mod.uk/careers

Standing in for the original presenter who couldn't make it, Jon gave a recap of the current state of recruitment pointing out that while there was a application rate 99-1 there was a significant lack in the engineering route.

He put this down to a false impression of engineering as more of a "grease monkey" than the higher level "logistician".

He gave a fascinating insight in the current synthetic training simulators which make extensive use of top level IT and pointed out that maintaining and developing these systems to is a type of engineering!

There is a new RAF Career website now out where young people can search by age / minimum qualifications or roles/skills.

Scouting & Aviation
(National Air Activities Advisor Chris Shaw & Tony Prentice)
www.airscouts.org.uk / scouts.org.uk

Chris began by pointing out the long history of association between Scouting and aviation. Baden-Powell himself was a fellow of the RAE. As far back as 1909 Scouts built a full sized glider and it was in 1911 that the aeronautical badge was first available.

1941 saw the formal recognition of "Air Scouts" which makes next year, 2011 their 70th anniversary!

To celebrate there will be a large aviation camp on the weekend of 13-20th August at RAF Syerston

Anyone who is willing to help with this should contact airventure@hotmail.co.uk

Tony then spoke about the Scout Microlight club. This is based at Old Hay and gets a lot of support from the strip owner. They are about to start building a HQ and hangar.

Activities including a whole range of flying types including large kites and parascending, rockets (solid and water) as well as microlighting. They have one flexwing and a Thruster at present and may also soon have access to Luscombe which will need some work doing on it (so are looking for helpers!)

Kent Scouts own the microlights so all scouts are "members" of the flying club which helps overcome some of the cost sharing legal issues.

Surrey scouts also do a lot of flying and are looking to connect with Young Aviators events etc.

Imagineering
(Alastair Graham Bryce)
www.imagineeringweb.co.uk

Imagineering was formed 10 years ago by a group of like-minded professional engineers concerned about lack of new young engineers.

They also run fairs and events, the largest of which can see 5-6000 families attend. These are valuable as it is important for parents to see parents enjoying the process.

It's all meant to be as fun as possible, as it has to compete with all the modern distractions young people have available to them!

They also spoke on the same theme that there is a need to catch young people imaginations while they are young to have a chance of influencing future subject and career choices.

To this end they support after-school clubs and supply a full terms kit of hands on activities.

These kits typically start with the BMFA "aeroglide" as it is simple, needs no tools, lets the kids do some colouring (always popular!). Ultimately the point is that they have MADE SOMETHING. There's a great focus on success and achievement.

At present there are around 150 clubs around the country there is a need to reach more. After all there are about 20,000 primary schools in the UK! At present the approach to getting on board is fairly word of mouth mostly through existing contacts

A follow-on club is running at secondary school level in Rugby High School for Girls.

Cost break down at around £580/year ish. £1.50/week/pupil.

Interesting at primary age the gender split is even.

They clubs get a lot of support from professional companies and 75% of the engineers running the club have been released from work hours to do so.

**Royal Aeronautical Society (RAeS) Young Members Board
(Lieutenant Richard Gearing, YMB chairman)
www.raes.org.uk**

RAeS supports all aerospace careers with a focus on engineering. They have an active Young Members Board (mainly undergraduate age, with free student membership).

They are heavily involved in the new Schools Build-a-Plane challenge as discussed earlier in the programme.

They also run the Launchpad for Learning website and organise "Cool Aeronautics" days for school groups.

The Young Members roadshows attend university events to promote aerospace engineering careers and will be launching a new careers website at Farnborough.

Lieutenant Gearing also spoke about the Fleet Air Arm aerospace careers opportunities. They are currently recruiting across all trades and offering "gold hellos" to engineers. Degree requirements have recently been broadened to encompass a wider range of subjects.

Special awards and bursaries are also offered including gliding scholarships, engineering course bursaries, and sixth form scholarships.

As part of their careers drive they have even produced an App for the iPhone!

**British Women Pilots Association: "Aspiration and Opportunity"
(Caroline Gough-Cooper, BWPA Chairman)
www.bwpa.co.uk**

Caroline began by outlining the arguments for the need for a women-only organisation in 2010 and pointed out that many female "firsts" were still comparatively recent (examples included BA's first women captain (1982) and first female fastjet pilot (1992). 2011 will be the 100th anniversary of the first woman licensed pilot. Young women still do need to be made aware that the chances are there for them too.

Activities the BWPA have been involved with include: Wrexham school science week, regional events, and a recent competition offering flights to women who had never flown before. The prizes of a free trial flight were donated by 60 flying schools and clubs around the country and a number of the winners have gone on to begin training for their PPL.

The organisation also offers a flying scholarship through the Amy Johnson Memorial Trust and the Air League. They are considering expanding into offering a second grant for women training in engineering.

Their monthly newsletter is sent out to a wide variety of clubs and schools in addition to members and they are happy to be contacted by any other organisation which would like to receive a copy.

**Air Cadets & staff of 11(F) Brooklands Sqdn
(names?)**

www.11f-brooklands.co.uk

www.aircadets.co.uk

2 staff and 3 cadets attend and spoke about the ethos of the Air Cadets. The scale was particularly striking. They are the largest gliding organisation in the world, offering 1000 gliding scholarships per year along with 125 powered flying scholarships. It obviously works well in terms of guiding young people into a flying career as 62% RAF pilots are ex Air Cadets.

The cadets themselves spoke enthusiastically about all of the activities they take part in, some of which included: gliding, aerospace camps, RAF station visits, flying, shooting, adventure training, trips abroad, (including one to Holland to march 500 miles in 2 days!) and careers advice.

A query was raised about the rules governing cadets taking part in Young Aviator events. This has been approved since about a year ago under the same pilot currency rules as the Scouts.

Panshangar & North London Flying School, Sywell

(Dave Irvine)

northlondonflyingschool.com

www.sywellaerodrome.co.uk

Panshangar runs a series of "Flight Discovery Days" from 11AM-to1.30 for families of members to get a chance to see what goes on at the airfield.

They also have a structured offering of school trips:

Primary - £16/student (minimum of 10)

Secondary £20/student

Ultimate £45/student.

These cover a range of curriculum-linked activities.

Sywell run an annual Enterprise Days, where school groups have the opportunity to visit a variety of businesses on the airfield including the Blades aerobatic team, Sloan Helicopters, Flylight, the fire service and Brooklands Flying School.

One point which was raised was that "engineering" is a very broad term, and it ears reminding young people that it does encompass design, IT, testing, writing of technical publications and lots more.

GAPAN (Guild of Air Pilots & Navigators)
(Captain Dacre Watson)
www.gapan.org

GAPAN has its Education and Training Committee and they attend shows and career fairs, aiming to overcome, 'I don't think I can do that' and giving careers advice on choice of subjects for those wishing to pursue a flying career.

They are also currently campaigning to get VAT removed from ATPL training.

The point was made that there is a problem in communicating with the adults more than the young people. A recent talk saw 220 school children and not a single school careers advisor.

The Guild of Young Members also do a lot of work and 14 scholarships are offered per year from PPL to ATPL/IR

The organisation undertake psychometric assessment and will mentor top 10% of applicants.

They also undertake charity work with schools in deprived areas, London and have provided Duke of Edinburgh award funding, science monitors and glider flights subsidised through the Benevolent Fund & the "High Flight" organisation. So far this project has held over 100 gliding days and flown 300 students, in spite of the fact that getting teachers to take parties out of school remains a challenge.

Astrasim
John Marshall
www.astrasimexpo.co.uk

John currently runs a online magazine plus a monthly newsletter. One of the main aims is to promote flight simulation, and to try and get more young people involved. The Royal Air Force Museum Cosford will be the venue for Summer Sim 2010.

John stated that we can all help bring about changes and help children from all backgrounds to grow and enjoy aviation, and flight sim is something that can certainly hold a child's interest and can obviously help them with an understanding of engineering.

Wrap-up

The conference concluded with an opportunity for networking and further discussion. All found it a productive and inspiring day.

Next year's conference will be 23rd April, again at Brooklands.