



Training and Evaluation

Danish Programme



Helge Hald

1970 - Glider student

1971 - ICAO Glider Pilot License

1972 - Instructor class 2

1975 - Instructor class 1

1979ff - Teacher / head of instructor courses

1987 - Examiner GPL

1989 - Boardmember DSvU (DSA)

1996 - 2010 Advisor / director DSvU

1996 - 2010 NCFI

2010ff - President NAC

(Royal Danish Aero Club)



The badges??



I am still a glider pilot by heart

**The NAC sponsored my trip to speak
here**



In the good old days (1930th and -40th)
“gliding” slowly developed from gliding to
soaring

Training methods were poor, and a lot of
effort was put into building gliders and
rebuilding them.

They often crashed, and were rebuilt with
glue and fabric during the night - ready to
fly next morning.

No authorities mixed up - happy days.



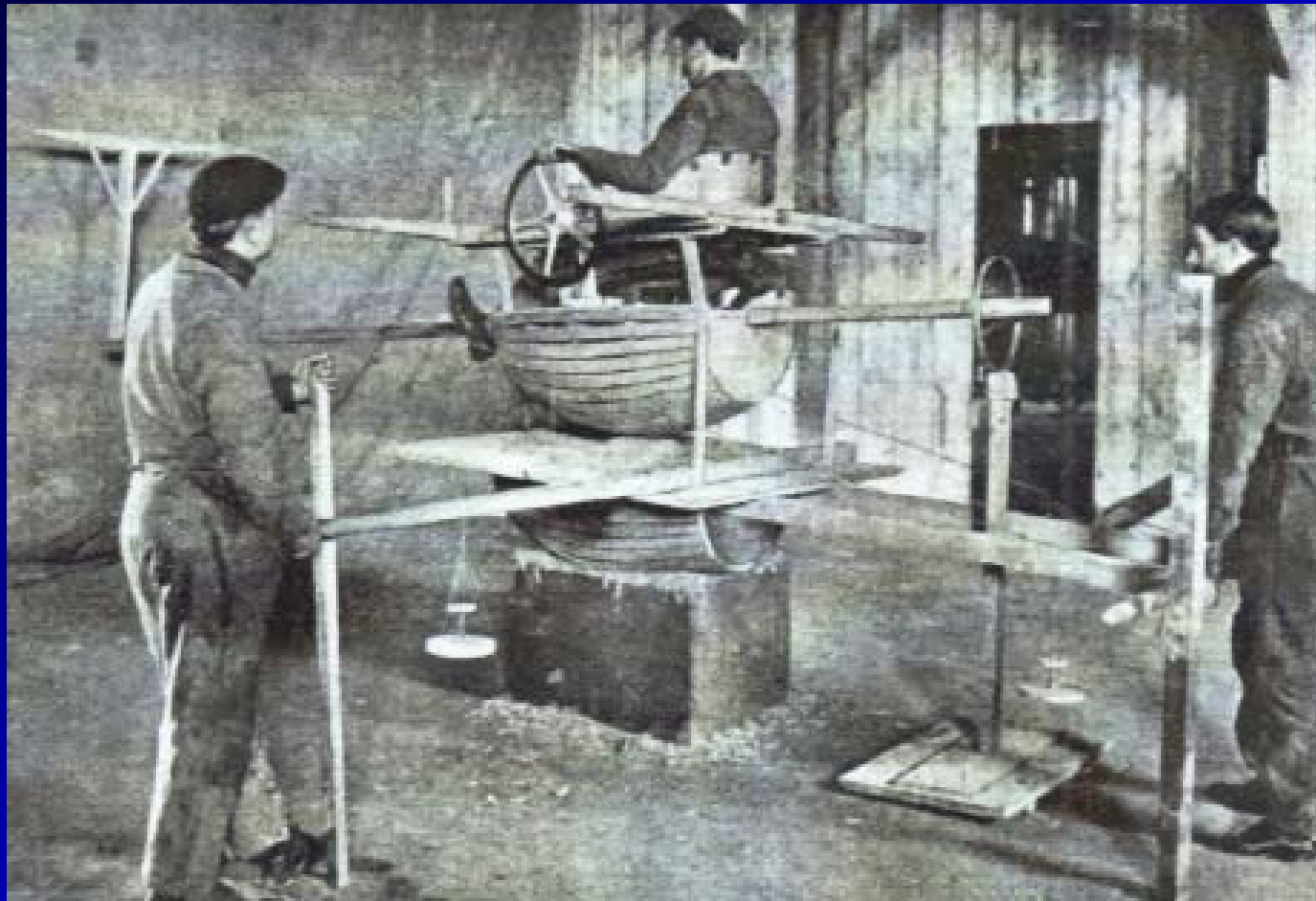
Gliding took place (and still do) in clubs

Everybody works for nothing - instructors as well as boardmembers

Subsidies are rare

But they had a lot of fun.

Somebody used their imagination and constructed simple simulators



Flight simulator



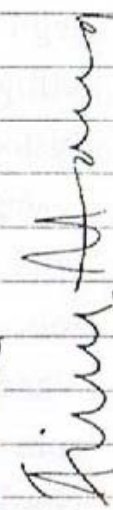
Logbooks were introduced to record flighttime and launches

Flighttime were counted in seconds

Manufacturers of stopwatches had good times.



Example of a logbook from 1951

19 51 Dato	Fly		Antall starter	Flytid			Start- metode	Slepe- tid	Sted	Anmerkninger om flygingen, avlagte prøver, resultat, værforhold m. m.	Link	Bevidnes
	Reg.	Type		L.	min.	sek.						
	LN-	Trpt.	63	1	05	05	S. F. B. F.					
15/4	GBD	H-17	64		3	30	v	Lade				
29/4	"	"	65		4	05	"	"				
"	"	"	66		2	40	"	"				
"	"	"	67		2	00	"	"				
"	"	"	68		1	40	"	"				
"	"	"	69		1	55	"	"				
1/5	"	"	70		4	00	"	Dysand				
"	"	"	71		21	30	"	"	C-seiling, hang			
6/5	"	"	72		4	40	"	"	hang			
"	"	"	73		10	10	"	"	"			
"	"	"	74		7	00	"	"	"			
C-diplom						NORSK AERØ KLUBB 7. sep.			74 launches 2 hrs. Result: C-diploma			
		Trpt.		2	08	15						

seconds

C-diplom

**74 launches
 2 hrs.
 Result:
 C-diploma**



2G Anno 1946 Glideratio 1:13



The new syllabus for training and evaluation was introduced in 2000
News were:

- **Another structure of the entire training**
 - (well - stick and pedals still work as usual)
- **Standards for flight and theorie**
- **Specific briefing topics**
- **Focus on special manoeuvres**
- **Evaluation forms**



PROJEKT 2000



We introduced a special logbook for basic training

- Complete description of the whole training syllabus
- The students own tool for preparation
- Evaluation scheme and room for I-comments
- Better and more precisely information of the students actual ability at transfer from one instructor to the next one



Just an example

FLYVNING	DATO OG INITIALER		
	ØVET MED ASSISTANCE AF INSTRUKTØR	ØVET MED KUN MUNDTLIG INSTRUKTION	UDFØRT AF ELEVEN SELV UDEN INSTRUKTION
Dagligt tilsyn			
Klargøring og inspektion af fly			
Cockpitcheck			
Start inkl. Signalgivning			
Drej og kurveskift			
Farttolerance: ± 20 km/t			
Kursflyvning			
Farttolerance: ± 10 km/t			
Disponering af flyvning			
Udkig			
Instrumenter og radio			
Landingsrunde			
Landing			
A-5			
DEBRIEFING			
Husk: Efter flyvningen (eller sidste flyvning) debriefes eleven.			



Definitions of the different maneuvers were introduced and split up in categories



Before solo

- Basic flight maneuvers
- Familiarization
- Speed control
- Course control
- Turns and shift of heading
- Combinations of the above



Before solo



- Basic flight maneuvers
- Advanced flight maneuvers
- Cable break / engine failure etc.
- Slow and fast speed
- Stall exercise
- G-force, abnormal flight position, sideslip
- Spiral dive
- Spin recovery



Before solo



- Basic flight maneuvers
- Advanced flight maneuvers
- Preparation for soloflight
- Flying briefed program
- Planning landing pattern
- SOLOFLIGHT



Overview of A-norms

OVERSIGT OVER A-NORMER	
GRUNDLÆGENDE FLYVEMANØVRER	
A-1	Tilvænningsflyvning
A-2	Fartkontrol
A-3	Kursflyvning
A-4	Drej og kurveskift
A-5	Kombinationsflyvning
VIDEREGÅENDE FLYVEMANØVRER	
A-6	Afbrudt start
A-7	Langsom og hurtig flyvning
A-8	Stall (ligeud, drej, luftbremser)
A-9	G-påvirkning (positiv/negativ), unormale flyvestillinger, sideglidning
A-10	Spind og spiraldyk
SOLOFORBEREDELSE	
A-11	Programflyvning og disponering
A-12	Soloflyvning



AFTER SOLO



- Type conversion
 - Familiarization with single seater
 - Slow and fast speed
 - Stall exercise
 - G-force, abnormal flight position, sideslip
 - Maneuvers practiced on two- and single seaters



AFTER SOLO



- Type conversion
- **Advanced flight**
- **Flying thermals with other gliders**
- **Landing off field or at another landing site -**
 - **-on two-seater only**



AFTER SOLO



- Type conversion
- Advanced flight
- Preparation for flights with examiner for GPL
- Flying briefed program
- Planning landing pattern
- Testflight with instructor
- Flight with examiner



Oversight of B-norms

OVERSIGT OVER B-NORMER	
VIDEREUDDANNELSE PÅ ANDEN TYPE	
B-1	Tilvænning til anden type
B-2	Langsom og hurtig flyvning
B-3	Stall (ligeud, drej, luftbremser)
B-4	G-påvirkning (positiv/negativ), unormale flyvestillinger, sideglidning
AVANCEREDE FLYVEMANØVRER	
B-5	Termikflyvning med andre fly
B-6	Landing i terræn
PRØVEFORBEREDELSE TIL S-CERTIFIKAT / LOKALFLYVNINGSTILLADELSE	
B-7	Programflyvning og disponering (Indstilling til prøve til S-certifikat / lokalflyvningstilladelse)
B-8	Flyveprøve til lokalflyvningstilladelse



STANDARDS for Flightmaneuvers



3 Levels:

- 1. Exercised with assistance of instructor.**
Oral instruction and hands on controls by instructor.
- 2. Exercised with oral instruction only**
Only oral instruction used.
- 3. Performed by the student quite alone**
Ready for solo on that specific maneuver.



STANDARD FOR Theoretical knowledge

Only 1 Level:

"Knowledge"

The student shall **RECOGNIZE** and
in own words **REPEAT** an earlier
briefed subject.



Syllabus and briefing subjects

Purpose with actual norm

Precondition

Subjects and evaluation

A-5 KOMBINATIONSFLYVNING		
FORMÅL		
<p>Du skal have introduceret dagligt tilsyn, herunder gives et kendskab til anvendelsen af flyets journal og håndbog. Desuden skal du gives et kendskab til flyets begrænsninger, termikflyvning med andre fly og stall med luftbremser.</p> <p>Endvidere skal du gives et kendskab til disponering af flyvning og begynde træning heri.</p> <p>Du skal vise et kendskab til signalgivning, start, instrumenter og radio, stall under ligeudflyvning og landing.</p> <p>Endelig skal du have forbedret din standard i udførelsen af tidligere øvede manøvrer, ved at disse kombineres under hver flyvning.</p> <p>Desuden skal du opnå en bedre generel føling med flyet og manøvrerne start, landingsrunde og landing.</p>		
FORUDSÆTNING		
Godkendt A-1 - A-4 (inkl.).		
BRIEFING OG VIDEN	DATO OG INITIALER	
	EMNET BRIEFET FOR ELEVEN	ELEVEN VIST KENDESKAB TIL EMNET
Fly journal		
Fly håndbog		
Begrænsninger på fly		
Termikflyvning med andre fly		
Stall (luftbremser)		
Disponering af flyvning		
Signalgivning		
Start		
Instrumenter og radio		
Stall (ligeudflyvning)		
Landing		



Fill in the Evaluation Schemes

DARK GREY FIELDS:

- Shall NOT be filled in



Fill in the Evaluation Schemes

LIGHT GREY FIELDS:

- Shows which levels the student has passed
- **COULD BE** filled in, if a maneuver has been repeated, and no progress since last exercised has been demonstrated.



Fill in the Evaluation Schemes

- **WHITE FIELDS:**
 - Shall not necessarily be filled in
 - Fields can be excluded if:
 - The student moves from level 1 to level 3
 - The student are on highest level from first step
 - As minimum white fields at the very right shall be filled in.
 - Not used white fields shall be stroken out



Logbook entries

Subject briefed

Subject controlled and Found OK

Subject controlled - not OK (Light grey field used.)

A-5 KOMBINATIONSFLYVNING		
FORMÅL		
<p>Du skal have introduceret dagligt tilsyn, herunder gives et kendskab til anvendelsen af flyets journal og håndbog. Desuden skal du gives et kendskab til flyets begrænsninger, termikflyvning med andre fly og stall med luftbremser.</p> <p>Endvidere skal du gives et kendskab til disponering af flyvning og begynde træning heri.</p> <p>Du skal vise et kendskab til signalgivning, start, instrumenter og radio, stall under ligeudflyvning og landing.</p> <p>Endelig skal du have forbedret din standard i udførelsen af tidligere øvede manøvrer, ved at disse kombineres under hver flyvning. Desuden skal du opnå en bedre generel føling med flyet og manøvrerne start, landingsrunde og landing.</p>		
FORUDSÆTNING		
Godkendt A-1 - A-4 (inkl.).		
BRIEFING OG VIDEN	DATO OG INITIALER	
	EMNET BRIEFET FOR ELEVEN	ELEVEN VIST KENDESKAB TIL EMNET
Fly journal	11/3-00 H.H.	
Fly håndbog	11/3-00 H.H.	
Begrænsninger på fly	11/3-00 H.H.	
Termikflyvning med andre fly		
Stall (luftbremser)	19/3-00 LBC	
Disponering af flyvning	12/3-00 LSR	
Signalgivning		
Start		12/3-00 LSR
Instrumenter og radio		
Stall (ligeudflyvning)	19/3-00 LBC	
Landing		



Logbook entries

Maneuver finished

Maneuver exercised
but not to satisfying
level

Maneuver exercised -
Now not satisfying level
Light grey field used

Maneuver exercised -
Satisfying in first
attempt

FLYVNING	DATO OG INITIALER		
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Dagligt tilsyn	11/3-00 H.H.		
Klargøring og inspektion af fly			
Cockpitcheck	19/3-00 LBC		
Start inkl. Signalgivning			
Drej og kurveskift		12/3-00 LSR	19/3-00 LBC
Farttolerance: ± 20 km/t			
Kursflyvning			11/3-00 H.H.
Farttolerance: ± 10 km/t			
Disponering af flyvning			
Udflugt		12/3-00 LSR	
Instrumenter og radio		19/3-00 LBC	
Landingsrunde			
Landing			

A-5

DEBRIEFING

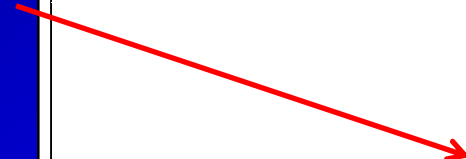
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Flight maneuvers

FLYVNING	DATO OG INITIALER		
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Farttolerance: ± 10 km/t			
Disponering af flyvning			
Udkig			
Instrumenter og radio			
Landingsrunde			
Landing			
			A-5
DEBRIEFING			
Husk: Efter flyvningen (eller sidste flyvning) debriefes eleven.			

**Very important !
DEBRIEFING**





Thank you for listening

Questions ?