



# ***Pro-Workshop Instructor***

## **India**

***Bir Billing 30 Jan to 10 Feb 2024***

***Master instructors: Amarjit (Avi) Malik***

***Instructors: Roland Dorozhani***  
*Jitendra Chindaliya*

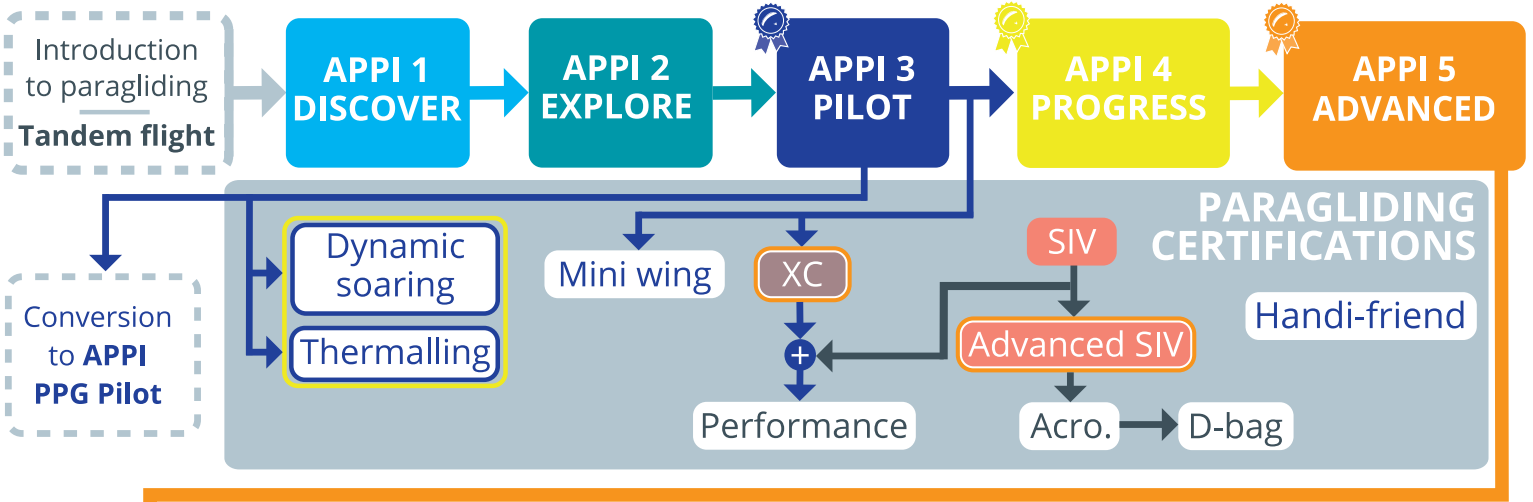
Document developed by Manu Bonte

*Organized by:* Templepilots

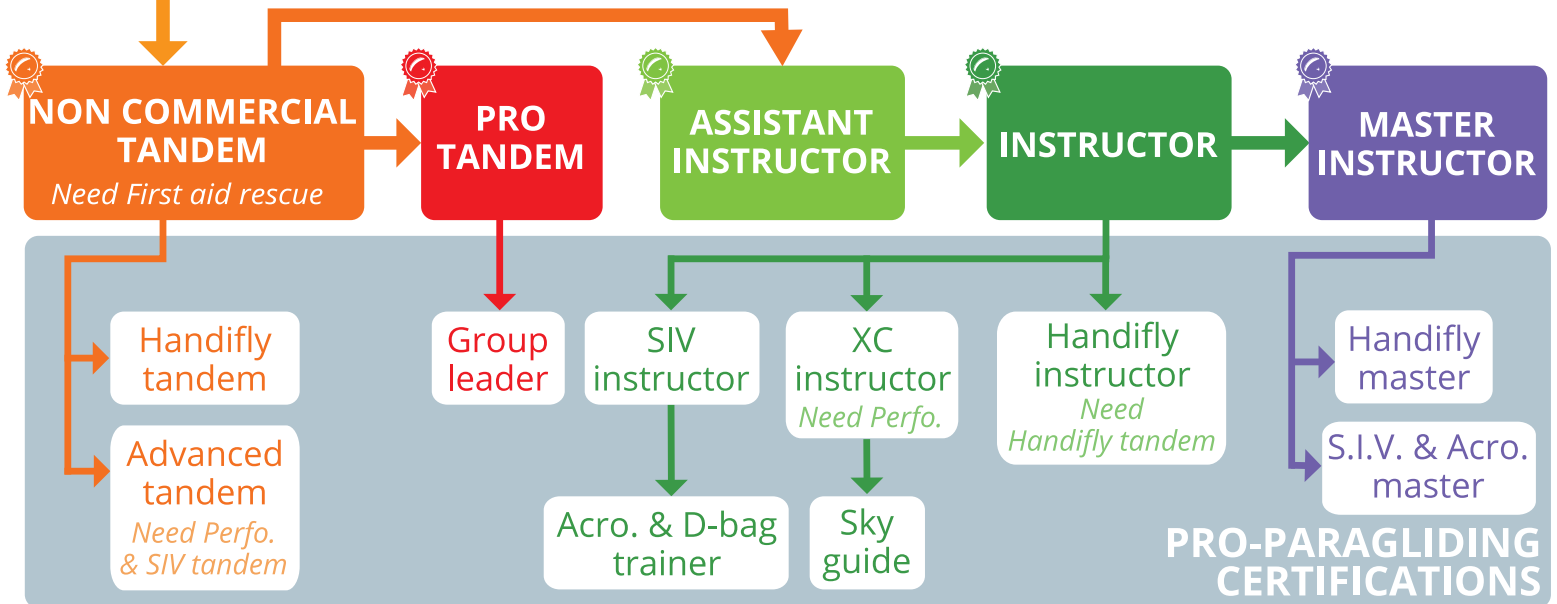
Paragliding School & Club

With the support of:

# PARAGLIDING LEISURE PILOT



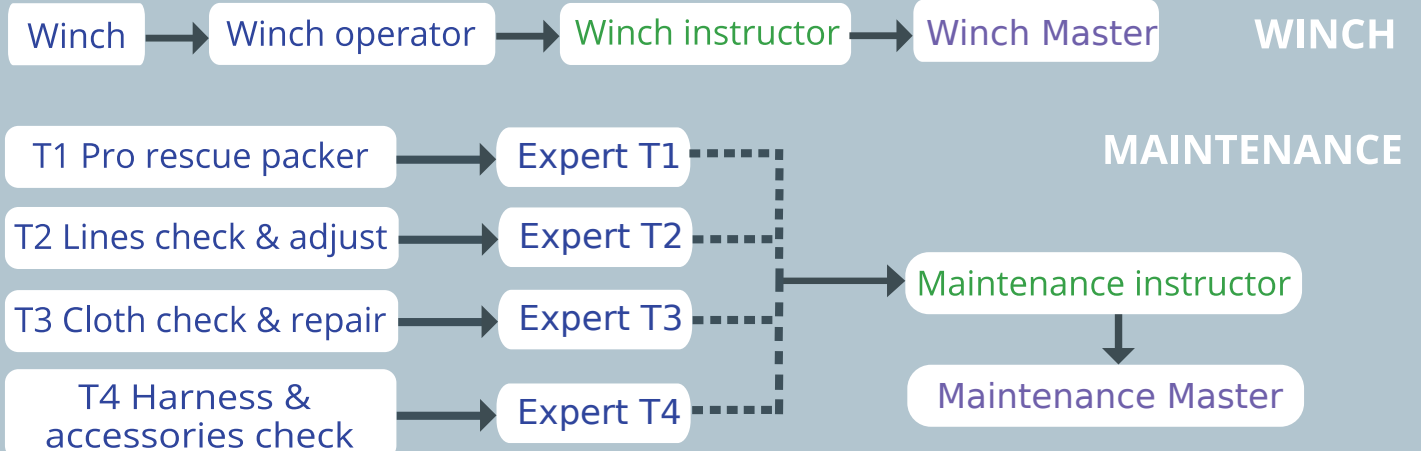
# PARAGLIDING PROFESSIONAL



# SPEED RIDE



# TECHNICIAN



**Unit N°5**  
***Pedagogy***  
***Psychopedagogy***  
***Analysis and tools***  
***Radio guiding techniques***  
***Instructor positioning***

**1. PEDAGOGY**

The key points that an instructor must handle:

- ✓ Risk
- ✓ Psychology
- ✓ Abilities

**A. A panel of teaching methods**

- ✓ Directive
- ✓ Active

**B. Organizing a lesson**

- ✓ The three periods of a session
  - Setting up
  - Activity
  - Conclusion
- ✓ How to manage the time
  - Total time and practice time
- ✓ What to keep in mind during a lesson
- ✓ Session development
- ✓ Seeking causes when a student faces a recurrent difficulty
- ✓ Evaluation

## **2. PSYCHOPEDAGOGY**

### **A. Communication**

- ✓ Emission
- ✓ Reception
- ✓ Understanding
- ✓ Communication timing

### **B. Emotions**

### **C. Personality**

### **D. Psychological factors**

### **E. Motivation**

### **F. Stress**

### **G. Risk**

## **3. ANALYSIS & TOOLS:**

### **A. An interesting survey**

### **B. Instructor's look**

### **C. Instructor's routine**

### **D. Reasons for failing a lesson:**

- ✓ The place
- ✓ Pedagogy
- ✓ Energy
- ✓ Mental attitude

## **4. RADIO GUIDING**

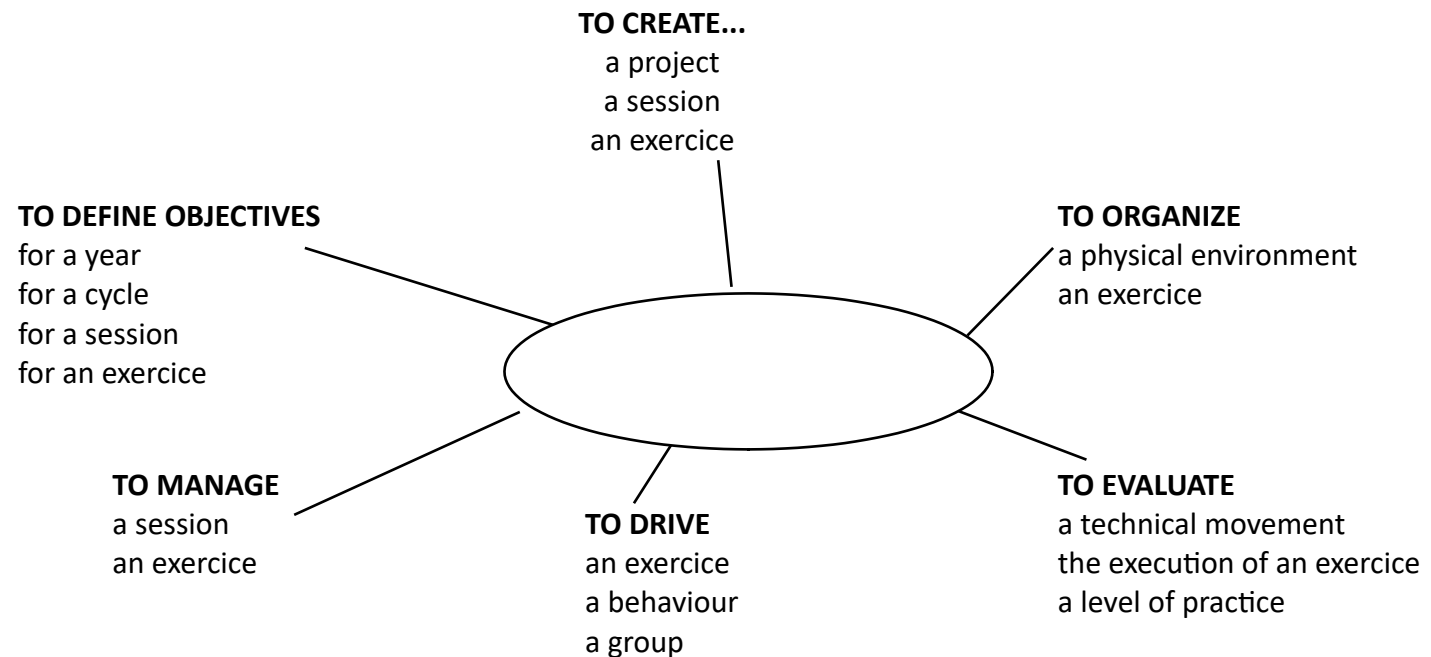
## **5. INSTRUCTOR POSITIONING**

## INSTRUCTOR'S QUALITIES

- *his main concern is safety*
- *he feels easy with communication*
- *he should enjoy teamworking and group living up*
- *he knows about gear, how to choose it and control it*
- *he must know his flying site (aerology and regulation)*
- *he is conscious about his exemplarity value*

- *he is able of empathy (being mindful, reassuring, prepared to listen)*
- *he is capable to anticipate*
- *he is able to react properly in an emergency situation*
- *he is interested in self evaluation and training*
- *he is able to control his stress and tiredness*
- *he is able to manage his time*

## INSTRUCTOR'S ROLE and FUNCTIONS are



## TRAINING A PARAGLIDING PILOT

SUBJECTS AND SKILLS TO DEVELOP IN A PARAGLIDING PILOT TRAINING				
	<b>ANALISIS</b> his relationship with the practice	<b>TECHNIQUE</b> his relationship with the glider	<b>PSYCHOLOGICAL ATTITUDES</b> Relationship with himself	<b>PRACTICE FRAME</b> his relationship with the environnement
<b>PRACTICE</b>				
<b>THEORY</b>				
<b>MENTAL ATTITUDE</b>				

# Instructor routine



Procedure	Comments
<p><b>Step 1 check environment, decide</b></p> <p>Check the weather, environment, choose most appropriate exercise regarding the conditions and the technical and mental level of the student</p>	<p>Preparation of various pedagogical sessions.</p> <p><b>See document: pedagogic session</b></p>
<p><b>Step 2 attention to student</b></p> <p>Check student stress, action to lower it.</p> <p>Mental preparation for flight.</p>	<p>Physical contact, jokes, drink, reassure him if necessary.</p> <p>Together, objective analysis of the general conditions of the environment and level of preparation of the pilot.</p>
<p><b>Step 3 present session, objective &amp; exercise</b></p> <p>Ask for the students analysis of climatic conditions and the environment regarding the objective</p> <p>Give exercise instructions to the student (briefing).</p> <p>Self-evaluation keys.</p>	<p>Comments</p> <p>As written in a document pedagogic session "exercise"!</p> <p>Ask for the student feedback!</p>
<p><b>Step 4</b></p> <p>Let the student prepare: site selection, be equipped</p>	<p><b>Direct method</b></p> <p>1. (These) are the conditions.</p> <p>2. You'll prepare there (define all)</p> <p>Or <b>ACTIVE method ?</b></p> <p>Assess stress level</p>
<p><b>Step 5.</b></p> <p><u>Repeat</u></p> <p>- Important points of the exercise,</p> <p>- Important safety points at the end (maximum 3).</p> <p>Ask for feedback to the student</p>	<p><b>Example:</b> limits of the exercise area, markers, traffic monitoring , reserve throw procedure, radio failure procedure, minimum altitude for exercise, forbidden routes, what if the instructor gives obviously wrong instruction etc ....</p>

<p><b>Step 6</b> Let the student make their check and focus: BE SAFE ...</p>	<p>Watch, be on alert! See document « instructor's look »</p>
<p><b>Step 7</b></p> <p><b>Your double check before take off</b></p> <p>1- leg straps 2- waist strap 3- karabiners 4- speed system working 5- controls without twist and lines far from the body 6- reserve (handle, pins) 7- radio check 8- --&gt;&gt;&gt;                      --&gt;</p>	<p>Discretely if possible, to let students feel the responsibility</p> <p>Watch out on the volume of other radios on takeoff. --&gt;In case of reverse launch, direction of rotation (risers).</p>
<p><b>Step 8</b></p> <p>The instructor positions himself on takeoff. Check radio communication with landing instructor if applicable. Request information on landing conditions.</p>	<p>See the lesson: "<b><i>position of the instructor</i></b>".</p> <p>Call from your radio, and listen the feedback in students radio Wind direction and strength, possible evolution, traffic, etc ...</p>
<p><b>Step 9</b></p> <p>Open the window: "whenever you want" Student says: "<b>Launching</b>"</p> <p>Control of takeoff / radio in hand, ready for action and communication.</p>	<p>Check cycles, traffic on takeoff and airspace</p> <p>See document "<b>instructor's look</b>"! Concentration on trajectory (horizontal and vertical), anticipation.</p>
<p><b>Step 10</b></p> <p>Start with exercises exercise respect box... ...until pass student to landing instructor</p> <p>Landing instructor asks the student which he receives confirmation ("name, move your feet if you hear me"), landing instructor confirms to have student under control.</p>	<p>"Pilot name, wing brand and color, location, heading to landing" What are your options if the other instructor does not answer?</p> <p>When confirmed, you're free.</p>



## CRITICAL FLIGHT PHASES: WHAT THE INSTRUCTOR HAS TO LOOK AT AND WATCH OUT

PHASES	SITE	GEAR	PILOT
PREPARATION			
HARNESS SET UP			
INFLATION			
Control!			
Acceleration			
TAKE OFF			
EXITING THE TAKE OFF			

PHASES		SITE	GEAR	PILOT
FLIGHT	STRAIGHT  TURN  EXERCICES			
APPROACH				
FINAL PHASE OF THE LANDING				
LANDING				



1: Start Point / requirements

**5: Exercises**

2: final objective

4: Sub-Objectives:  
have student able to...

3: What is new?

In practice

In theory

1: Start Point / requirements

**5: Exercises**

2: final objective

4: Sub-Objectives:  
have student able to...

3: What is new?

In practice

In theory



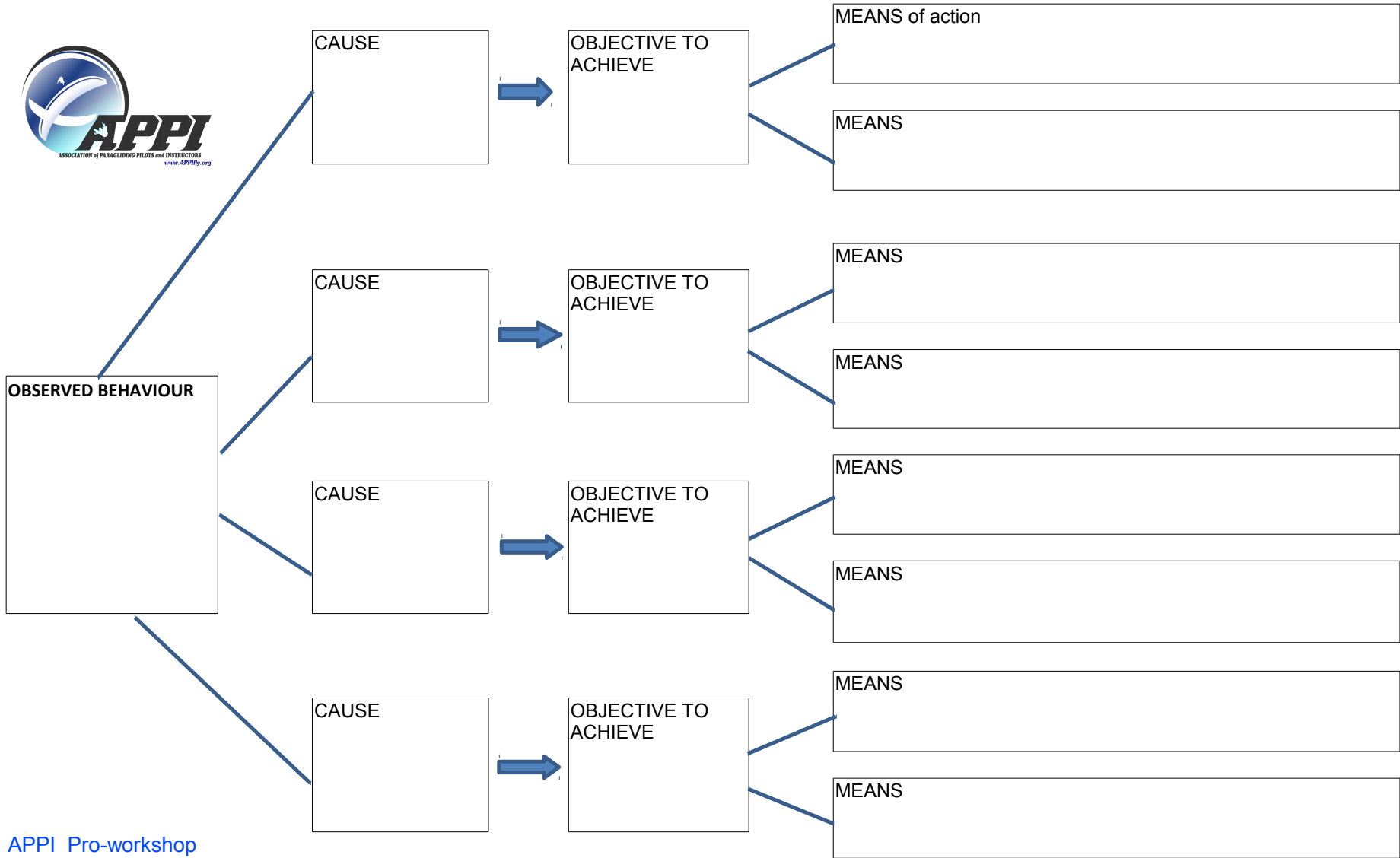
Date :	Number of students:		Instructor (s) :	Available total time :				
Course name :	Student's names:		Assistant (s) :	Practice time :				
General objective :				Comments :				
Student's requirements : -theory, technic, mental, experience-								
Environment's requirements : -place, weather, traffic-					Emergency number :			
Topic of the theory course that will be given in relation of this practical course								
Sub-objective: have the student...	Evaluation criteria objective is reached if...	Exercise briefing (written as it will be said)	end briefing with : Chosen Safety instructions (3 max)	Time	Tools	Identification of ALL the possibles RISKS of the exercise	Safety instructions to give to avoid the identified risk	How should the instructor react in case this risk happens

Sub-objective: <i>have the student...</i>	Evaluation criteria <i>objective is reached if...</i>	Exercise briefing <i>(written as it will be said)</i>	end briefing with : Chosen Safety instructions (3 maxi)	Time	Tools	Identification of ALL the possibles RISKS of the exercise	Safety instructions to give to avoid the identified risk	How should the instructor react in case this risk happens

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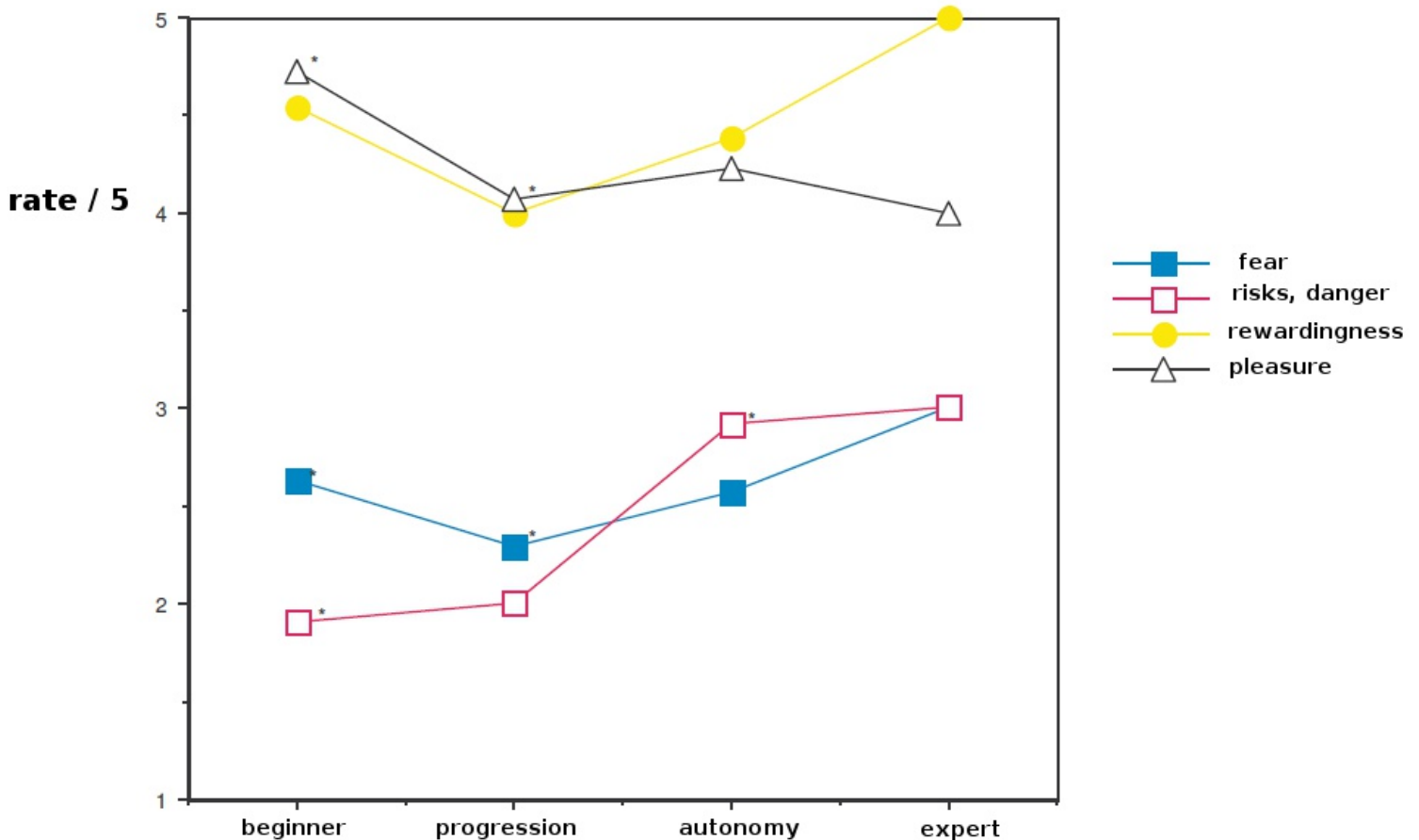
# ANALYSING CAUSES



APPI Pro-workshop

## What raises my stress level ?

<i>Stress factor</i>	<i>remedy</i>
over crowded site stressed student not sure prerequisites are acquired no wind external disturbance	site choice psychological work, better technical preparation cancel flight or change objective instructor position, instructors look manage environment
Low speed take off get into harness with hands low, brakes in hand bad control on take off, glider limit collapse bad trajectory control on take off bad trajectory control in turbulent air	More ground handling simulator work more ground handling more ground handling slower progression
critical eye on me changing conditions radio failure student does not respect instruction student's "brain freeze", mental viscosity	master your activity, stress management techniques site choice, agility to adapt objectives gear check, maintenance, radio failure briefing work your leadership, fire student "electric shock" (punchy radio intervention...)
other instructor very tired don't trust other instructor	have him be professional, manage his energy change
money problem bad organization ...	change job, marry a rich (girl-boy-other) work on your organization, use APPI tool ...



## MENTAL STRENGTH SELF-EVALUATION



This tool is inspired by the mental strength evaluation made by Antoni Girod (2003). It helps to be able to know one's weaknesses and strengths and to define improvement guidelines.

21 mental abilities are proposed. Give a value to each of them. If it fits you completely, cross out 6; if it is the contrary cross out 1.

You may use the columns - - and ++ if you consider yourself excessive in one way or the other.

Mental qualities	- -	1	2	3	4	5	6	++	Comment
Passion									
Enthusiasm									
Pleasure of flying									
Taste for making an effort									
Discipline									
Respect									
Humility									
Constancy									
Willingness									
Ambition									
Determination									
Courage									
Boldness									
Autonomy									
Motivation									
Self-confidence									
Calm									
Concentration									
Fighting spirit									
Lucidity									
Adaptability									

Do some answers highlight a risk within the framework of your activity?

The values you will give to these abilities will change with time. Knowing your weaknesses makes it possible to work on your mental strength and optimize it. You should do this exercise on regular basis, date, archive and compare the results through time.

## ERROR DETECTOR and POSITIVE MENTAL STRENGTHENING



**Objective:**

To encourage the pilot or instructor to develop its critical thinking skills. Improve their level of vigilance, safety and performance keeping his motivation up.

**What mistakes did I make?**

Each pilot or instructor should be able to identify at least 3 mistakes he made during a flight or a class. If the prestation was close to perfect, the identified errors will be minor, otherwise they will be grosser. An important point is being able to identify the real reasons of a fail.

**Where was I successfull?**

Also identify 2 points they were successfull. Being able to identify the progress allows to keep on progressing with a positive dynamic.

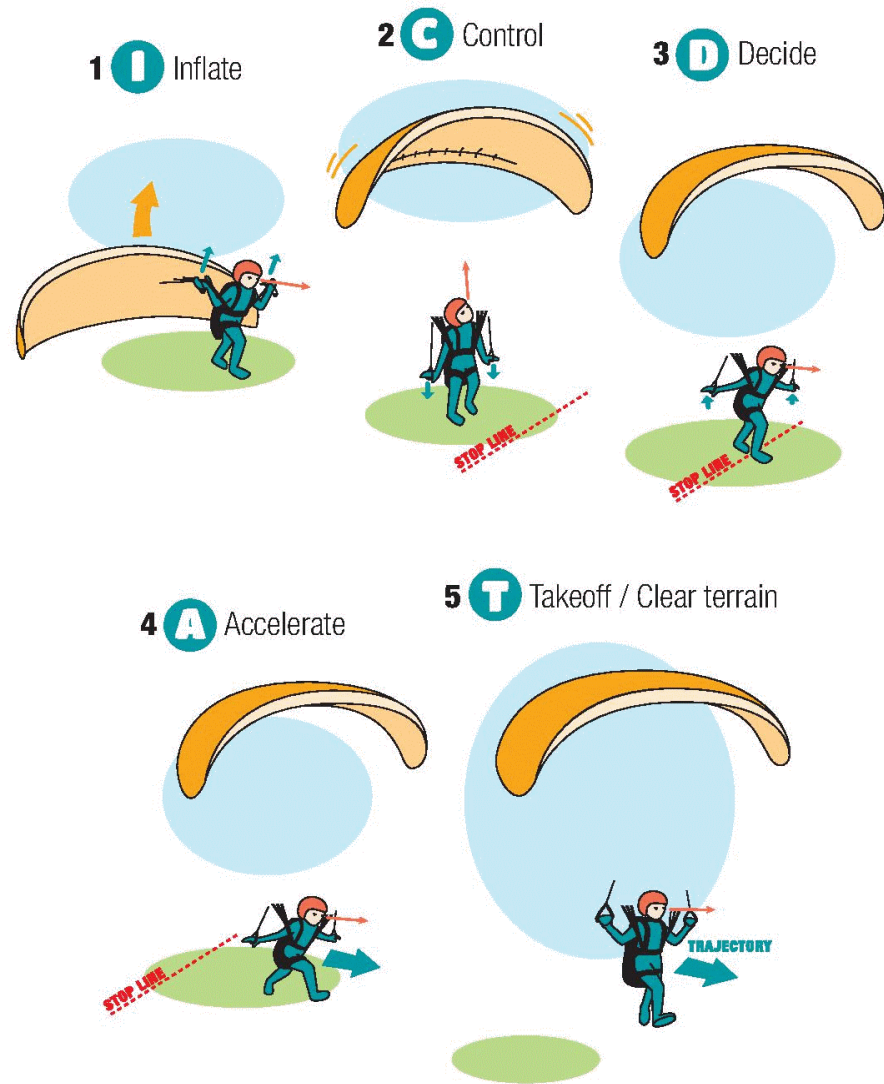
**Date:**                      **Place:**                      **Event description:**                      **Event duration:**

Error	Description	Cause	Remedy/solution
1			
2			
3			

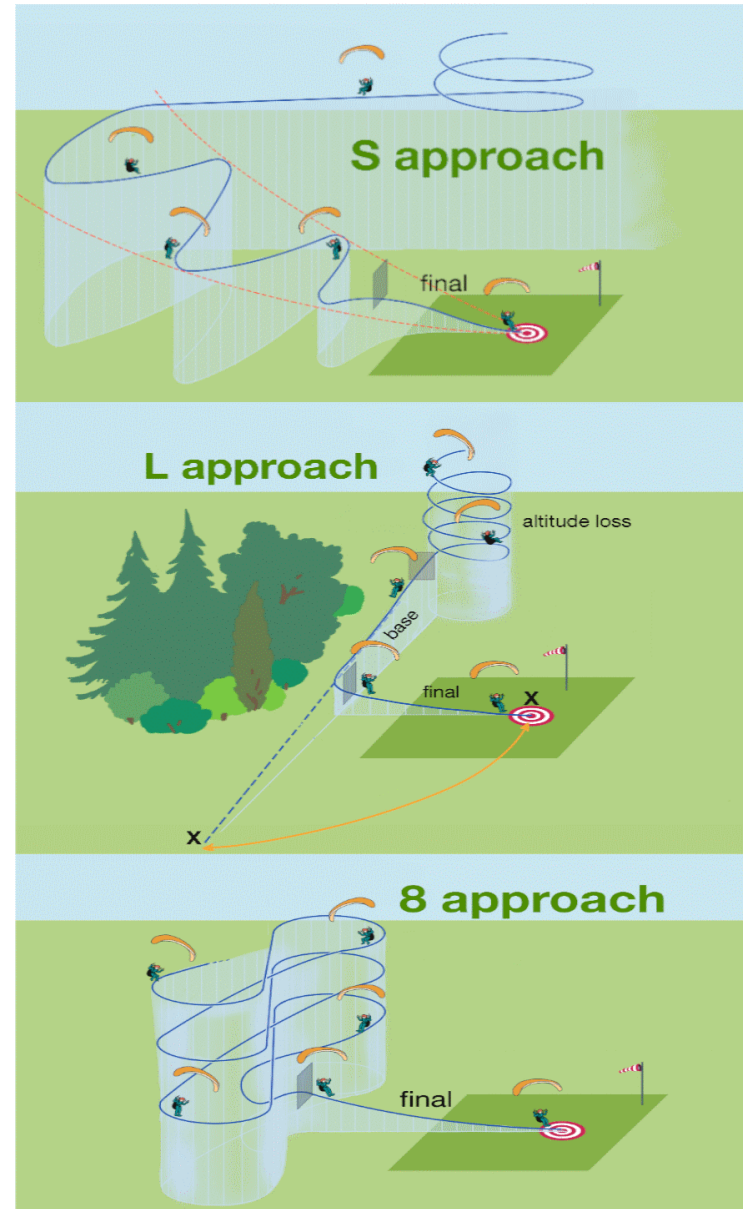
Success	Description	What ressources did you use to succeed
1		
2		



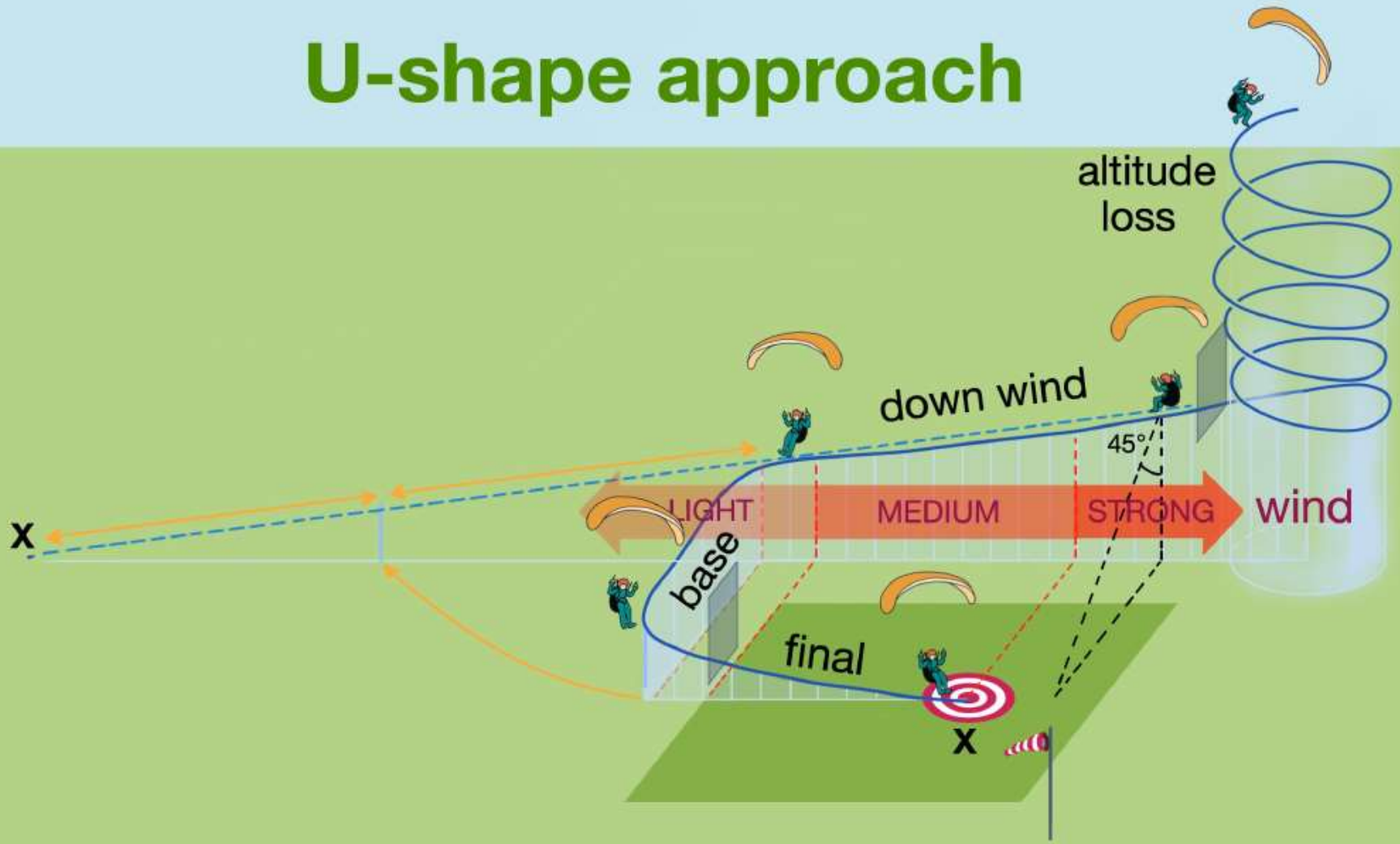
# TAKEOFF PROCEDURE



# LANDING PROCESS

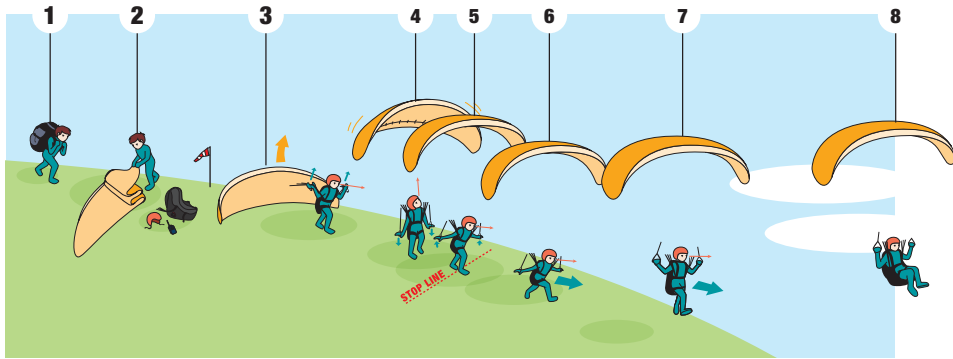


# U-shape approach





# APPI GLOBAL FLIGHT PROCESS



## I - TAKEOFF

### ① Preparation / Set-up

- Mental state awareness
- Choose place (wind, obstacle, slope)
- Set-up (glider in U shape, ⊥ wind)
- Clear the lines (1 by 1 or pre-inflation)
- Get into harness (check reserve first)

### ② Pre-flight check: B.E.S.A.F.E.

- **Buckles** (legs, waist & chest straps, helmet, carabiners)
- **Equipment** (reserve, glider, lines, brakes, speed bar, radio)
- **Stop line** (visualize limits and technique)
- **Airflow** (wind direction, strength, cycles)
- **Free airspace and runway**
- + **Enjoy your flight**

### ③ Inflation

- Choose the moment
- Quick look around
- Symmetric position of the hands
- Chest-strap pressure

### ④ Control

- Timing (release A > commands)
- Deep action on commands
- +/- look

### ⑤ Decision > Stop or Go

### ⑥ Acceleration

- Chest-strap pressure
- Hand position
- Balance pilot/glider
- Look ahead
- Trajectory

### ⑦ Takeoff

- Don't release commands
- Trajectory, **clear terrain**
- Speed range

### ⑧ End of takeoff procedure

- Traffic check
- Get in the harness, in-flight check

## II - FLIGHT



Air speed ≠ Ground speed

Air trajectory ≠ Ground trajectory (Drift)

### Speed range / Air (+/- 2 km/h)

- Best glide ratio ≈ 39 km/h
- Hands up speed ≈ 37 km/h
- Min sink speed ≈ 34 km/h
- Min speed ≈ 25 km/h (not for beginner)

### Heading correction

- Visual marker 2 points
- Drift visualization and control
- Look, lean, +/- command

### Turn control

- Take markers, 90°, 180°, 360°
- From trim speed: look, lean, pull inside command, release.
- From min sink speed: look, lean, release outside command, return to min sink speed.
- Leaning and command actions are progressive
- Traffic rules

### Rescue procedure

- look-reach-pull, throw, control glider

### Exercises

- Pitch control
- Roll control
- Big ears + speed bar
- Figure of 8 (stay there, forward, backward)
- Min sink, turn

## III - LANDING

- 3 different approach-landing
- Target > get into final door at good height and good place

### Arrive in landing area high enough and upwind to

- Anticipate
- Take information (landing size, obstacles, wind direction and velocity, other pilots)
- Imagine and build your approach

### Final must be long enough to

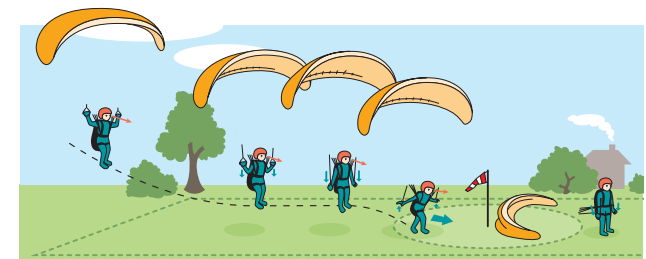
- Stand up if not done before (recommended before)
- Take speed (wind gradient, final braking)
- Adjust trajectory using weight shift
- Adjust final braking (flare, timing)

### Some basics

- When start approach:
  - Never fly over landing (keep 45° angle)
  - Never put landing in your back
- Place of the base part:
  - Windy conditions: make the base leg closer to the target
  - Light wind: base further
- No obstacle between you and landing
- Final must be into the wind
- See your fixed point

### In case of radio failure

- Don't worry about accuracy
- Choose widest place free of obstacles
- Land into the wind





APPI piloting progression

Basics

SIV

pendulum effect, energy

advance piloting, acro.

pitch

**discovery of movement**  
 timing, symmetry, amplitude  
 sensation/ wind and weight

**create and maintain of pitch**  
 bigger amplitude  
 continue alone  
 understanding of different parts  
 acceleration, loose of energy, the glider dive  
 brake pressure

**pitch control**  
 timing, amplitude, let fly

**BIG pitch control**  
 after serial dive or wing over or.....  
 timing, amplitude, let fly

roll

**discovery of movement**  
 body weight shift  
 timing, sensation

**create and maintain roll with big ears**  
 understanding timing,  
 efficient weight shift  
 symmetry of roll

**roll control with big ears**  
 progressive weight shift, timing,

**Small wing about 60°**  
 where to look, timing body shift  
 timing amplitude of brake  
 symmetry, fluidity

**dynamic turn**  
 understand timing, amplitude, 180° turn  
 come back on the pitch axis  
 fluidity, no collapse outside, pilot the 3 axes

**wing over**  
 timing, amplitude, symmetry,  
 Control the outside wing  
 straight line hands up, no collapse

**Asymmetric 360°**  
 serial with pith movement  
 amplitude, timing, outside brake control

looping

rotation

**Discovery 360° turn**  
 large 360° turn left an right  
 Be able to count, 3D marker

**360° turn from minimum sink**  
 pilot with outside brake  
 adapt the speed of turn  
 exit by turn

**discovery spiral dive**  
 first acceleration and exit  
 where to look  
 exit symmetric braking, stop the energy  
 pitch exit timing, control, let fly

**spiral dive control**  
 speed control with the outside brake  
 yaw control inside the spiral  
 altitude check, be able to count the turn  
 know where you are  
 G force adaptation

collapse

**big ears**  
 as big as possible with one line

**Big ears with speed bar**  
 know the process

**frontal collapse**  
 loose of lift  
 pendulum sensation  
 Be careful over piloting

**asymmetric collapse two lines**  
 trajectory control, fly straight  
 weight shift, 180° turn opposite of the collapse  
 Be careful over piloting

**50% asymmetric collapse**  
 trajectory control, fly straight  
 weight shift, 180° turn opposite of the collapse  
 be careful over piloting

**collapse with speed bar**  
 release speed bar, weight shift, position  
 come back on a straight fly

**discovery auto rotation**  
 first turn, open the collapse, 360° turn exit

**Auto-rotation, cravat**  
 2 turn, keep the collapse exit  
 weight shift, outside brake : amplitude timing

low speed, stall

**minimum speed**  
 brake pressure  
 position of brake, symmetry  
**let fly**

**B-stall**  
 symmetry, stabilization of pendulum  
 efficiency, stability  
 exit  
 Be careful over piloting

**backfly**  
 stall, stabilization pendulum  
 recovery to backfly  
 look the glider, straight backfly  
 let fly (timing) pitch control  
 be careful over piloting

**dynamic full stall**  
 entry, exit, axes, amplitude

spin

**90° spin from max speed**  
 speed and amplitude of brake  
 canopy deformation  
 exit hands up  
 pitch control

**spin minimum speed, mini 3 sec.**  
 not brake outside  
 where you look  
 body harness position  
 back fly exit

**spin max speed.**  
 wait to be under the glider  
 back fly exit, be careful to your legs!

**pitch to spin**  
 be careful twist. Stay in your spin, legs  
 no brake outside  
 backfly exit

helicopter, twister, ....

mac twist

misty flip

sat

**sat**  
 timing entry, speed control  
 360° exit, no collapse  
 body position

**asymmetric sat**  
 entry : take speed control of energy  
 timing  
 amplitude  
 exit 360° turn

rhythmic sat

tumbling



## Unit n° 6

### *APPI System*

#### 1. SOME POINTS ABOUT TEACHING TO FLY (UP TO AUTONOMOUS PILOT)

##### A. What an APPI pilot should master

###### 1) Practice

Technic, analysis, emotional control

###### 2) Theoretical

Weather, flight mechanics, piloting, air laws,  
equipment, analysis methods, emotions

###### 3) Attitude

##### B. What to teach

###### 1) ground handling

- ✓ General considerations
- ✓ Analysis, preparation
- ✓ Preflight check
- ✓ Take off procedure
- ✓ Technical skills
- ✓ emotional control
- ✓ Goal to reach : is the student really ready to fly ?

###### 2) In flight

- ✓ General considerations
- ✓ On take off
- ✓ Inflate
- ✓ Take off stages
- ✓ In flight
- ✓ emotional control

###### 3) Approach and landing

##### C. Piloting

- ✓ Progression chart

##### D. First steps in the thermal

## 2. APPI SYSTEM AND DOCUMENTS

### A. what is APPI

- ✓ The APPI structure
- ✓ The link between us

### B. APPI system

- ✓ Education system, exams, pilot's manual,
- ✓ Validation rules
- ✓ Field control and black list
  
- ✓ APPI documents to download  
Logbook and evaluation forms, how to use them
  
- ✓ How to
  - Register as a member
  - Pay or not my students membership
  - Declare my school or flying center
  - Add an instructor or a tandem pilot to my school staff
  - Declare an accident, make a complaint

### C. New registered member, what he has to do

- ✓ Pilot
- ✓ Tandem pilot
- ✓ Instructor

### D. APPI membership


- ✓ What for, what are the benefits
- ✓ Pay for a member
- ✓ Buy credit for the school
- ✓ Pedagogical project for instructors

### E. Prerogatives and duties

- ✓ Of a tandem pilot
- ✓ Of an instructor

### F. Master instructor

- ✓ How to become a master
- ✓ Prerogatives and duties

Date : 21/10/20	Number of students: 2	Instructor (s) : Tom Pretyguy // Sandra Deli	Available total time : 4h30					
Course name : <b>First dynamic flight</b>	Student's names: Maria Maurer #40810 // Toto Sarace #41829	Assistant (s) :	Practice time : 4h					
General objective :	<b>Have the student able to perform dynamic soaring with first taste of autonomy</b>		Comments : meeting direct on the site, 30' for greetings, gear..					
Student's requirements : -theory, technic, mental, experience-	-Comfortable with top to bottom flight, full autonomy. Ability to locate vertically, able to turn & exit on defined axis (inertia). Ability to perform moderate bank 360°. Able to use the radio in flight -Good handling in steady wind, masters how to deflate the glider, Approach with wind. -Knows the site, already used a vario, emotionally ready to handle longer flights -Theory : Drift, air speed VS ground speed, gradient, aerology & traffic rules							
Environment's requirements : -place, weather, traffic-	Site : Vauchos (400m denivelation), wind 15-25 kmh, low tide, landing area on the beach clear Traffic: a maximum of 3 pilots fly in addition to us,		<b>Emergency number : 112</b>					
Topic of the theory course that will be given in relation of this practical course	<div style="background-color: yellow; padding: 5px; display: inline-block;">Aerology: lift in dynamic conditions. Piloting: trajectory with drift control</div> 							
Sub-objective:	Evaluation criteria	Exercise briefing (written as it will be said)	end briefing with : Chosen Safety instructions (3 maxi)	Time	Tools	Identification of ALL the possibles RISKS of the exercise	Safety instructions to give to avoid the identified risk	How should the instructor react in case this risk happens
Get & understand the general briefing	Feedback quality  Playground limits and General safety instructions memorized and understood.	<p>Presentation : -General objective: use the dynamic lift to make a few laps forth and back along the slope</p> <p>Organisation: -the flying site : terrain limits, orientation, markers (lake, village, take-off, landing) -we will perform around 5 flights today</p> <p>What is your opinion about the weather ? Around (clouds), in altitude and landing (wind direction&amp;speed), on take off (+cycles period and amplitud)</p> <p>What is your opinion about the dangers, what to do ? Traffic on TO (pilots TO- topland) / gusts / in flight traffic / terrain proximity with drift</p> <p>Fast remind : - technique to deflate your wing ? - flight rules: 1 avoid collision: right of way is given, never taken! any doubt about other pilot's trajectory, head out! 2 look before turn, 3 if another pilot heading towards you and has terrain on his right, he has right of way : head out and give enough space..</p>	<p>safety: we are on a takeoff, people may take off or topland, watch for traffic during briefing.</p> <p>General Safety instructions for the day: -awareness traffic on take off &amp; in flight -in flight you will go where you look. -without radio communication, go to landing and look for instructor in the center.</p> <p>! Remind me the important point of the briefing !</p>	20	Flags to limit the area	Traffic	Watch for traffic while we are doing briefing	The instructor is constantly on watch, alert the students in case of risk
Warm up	Feels ready	Warmup ankles, knees, hips, shoulders, arms, wrists, neck	proceed progressively	10		Hurt themselves	Proceed progressively	
Lower stress level	Traffic awareness  Soft and natural wing handling  Physiological stress evidence	lets do some kiting to relax : inflate and control the wing staying in the area defined by the cones, (back part of the take off)	<p>-no inflation exercise without prior radio check</p> <p>-deflate if someone is in approach</p> <p>-if gust when glider above head, stay hands up</p>	15	complete paragliding gear, 4 radios working,  4 cones	<p>-Student takes off</p> <p>-Traffic: Someone in approach</p> <p>-Wind gust when glider is on top the head</p> <p>-Wind gust when glider on the ground</p>	<p>Respect the given GH limits</p> <p>deflate the wing</p> <p>hands up</p> <p>appropriate deflate technique</p>	<p>Instructor pays attention. Radio ready, in instructor's hand</p> <p>instructor aware of traffic</p> <p>instructor close to student</p> <p>instructor close to student</p>

<p>identify the good place to prepare on the takeoff</p> <p>prepare properly</p>	<p>pertinence of analyse (wind strength +-4km, wind direction +- 15°, cycles, topology)</p> <p>does a good analyse result in good location choice.</p> <p>Good safety management while buckling</p> <p>Preflight check no mistake no hazard, BESAFE</p>	<p>Where will you install to take off ? (if not mentioned by student: where do you locate your Stopline)</p> <p>Where will you prepare ?</p> <p>Get ready.</p>	<p>Rear risers in hand while buckling</p>	5		<p>-Wind gust while getting ready</p>	<p>rear risers in hand</p>	<p>instructor close to student</p>
<p>lower stress level</p> <p>identify the lift area limits</p>	<p>Feedback after flight</p> <p>pertinence of the identified limits +-50m</p>	<p>We start with a first flight top to bottom.</p> <p>Take off, trajectory perpendicular to the mountain, listening to variometer identify reference point of lift area limits on the ground ...</p> <p>Feedback after flight</p>	<p>-when you decide to takeoff, no traffic around (big margin), watch your trajectory &amp; traffic during the exercise</p> <p>-Heading to landing, the landing instructor will contact you. WITHOUT radio contact, look for landing instructor in the target, perform your approach and landing, if something goes wrong he will guide by sign</p>	30	<p>record flying track (smartphone+xc track)</p> <p>instructor at landing</p> <p>Vox or holster for radio</p>	<p>traffic</p> <p>Trajectory</p>	<p>watch for traffic</p> <p>watch trajectory</p>	<p>radio</p> <p>Radio</p>
<p>see the difference ground/air speed</p> <p>Experience the time difference to cover a distance headwind and downwind</p> <p>check that safety procedures are robust</p>	<p>pertinence of feedback</p> <p>-times in and out</p> <p>-despite the task set, performs a good BESAFE Vital points last check (4 points)</p>	<p>Take off, trajectory perpendicular to the mountain, head to landing</p> <p>“in and out”</p> <p>-vertical of the upwind limit of LZ keep on flying straight into the wind for 15 sec, watch your groundspeed</p> <p>-then turn back and count the time to get again vertical to the upwind limit of LZ &amp; watch your groundspeed.</p> <p>-as soon as passed the limit again, turn to head into the wind</p>	<p>-when you decide to takeoff, no traffic around (big margin), watch your trajectory &amp; traffic during the exercise</p> <p>-Exercise only if above 150m + radioclearance of landing instructor.</p> <p>-Heading to landing, the landing instructor will contact you. WITHOUT radio contact, no exercise. Look for landing instructor in the target, perform your approach and landing, if something goes wrong he will guide by sign</p>	30		<p>Arrives too low on LZ</p> <p>Traffic</p>	<p>below 150m no exercise</p> <p>LZ instructor clearance</p>	<p>LZ instructor on radio</p> <p>LZ instructor on radio</p>
<p>understands the difficulty of evaluating the trajectory in turns with drift</p>	<p>the track never “bites” the landing</p> <p>track within 50m upwind of the landing limit</p>	<p>“360”</p> <p>-Fly straight into the wind until you consider you have enough distance to perform a 360 turn with very moderate bank passing as close as possible of the vertical of the upwind limit of LZ, but without “biting” the landing</p> <p>-Perform that turn with even Bank</p> <p>-Assess your trajectory and the distance you passed from the upwind limit of LZ</p> <p>-stabilize heading into the wind</p> <p>Feedback after flight</p>	<p>-inner hand should never go lower than karabiner</p> <p>-Exercise only if above 150m + radioclearance of landing instructor.</p> <p>-Heading to landing, the landing instructor will contact you. WITHOUT radio contact, no exercise. Look for landing instructor in the target, perform your approach and landing, if something goes wrong he will guide by sign</p>			<p>Arrives too low on LZ</p> <p>Traffic</p> <p>Spin</p>	<p>below 150m no exercise</p> <p>LZ instructor clearance</p> <p>Inner hand should never go lower than karabiner</p>	<p>LZ instructor on radio</p> <p>LZ instructor on radio</p>
<p>Be able to identify the drift</p>	<p>feedback on the trajectory +-15°</p> <p>If feedback not pertinent, replay the flight on play the IGC with xc track (heading vector and track) or avyri</p>	<p>take off, head perpendicular terrain 10 seconds, then head to the harbor, take a point aligned between you and the harbor, observe how they get out of alignment</p> <p>Keeping the same heading, look for points that stay aligned to find your actual trajectory... report by radio</p>	<p>Watch for traffic</p>	30		<p>Traffic</p>	<p>watch Traffic</p>	<p>radio</p>
<p>Be able to control the drift</p>	<p>accuracy of trajectory. Stays within +-10m of the axis (1x glider’s span)</p> <p>Smoothness of the corrections, anticipation.</p>	<p>...Same trajectory for 30 secs keeping the points aligned, smooth corrections then head to landing.</p> <p>Feedback after flight</p>	<p>Watch for traffic</p> <p>Trajectory out of control, look ahead to the landing, pull controls symmetrically to min sink speed, maintain until it stabilizes</p>			<p>roll, diverging trajectory</p> <p>Traffic</p>	<p>watch ahead</p> <p>watch traffic</p>	<p>radio</p> <p>radio</p>

Be able to maintain a trajectory parallel to the cliff	keeps trajectory +-10m, corrections softness, anticipation	take off, head perpendicular terrain for 5 sec  Turn smoothly right (to the village) adopt a trajectory parallel to the cliff controlling the drift.  once at the field limit, turn back left until trajectory is parallel to cliff again without trying to get closer to it.  once at the field limit, turn back right until trajectory is parallel to cliff again without trying to get closer to it.  Once at the field limit, go for landing.	-Respect of priority rule, any stress : look before turn and head out  -The glider should always be pointed in the 180° sector to the beach  -Without radio communication for more than 30 sec, go land	40		Fly into the cliff  Trafic	watch out for trajectory, never take a heading towards the cliff  any problem get away from the cliff	radio  radio
Be able to perform a dynamic soaring relatively autonomously	good management of drift to the liftzone  Positionment in the best lift area +- 30m	take off, turn right (to the village), adopt trajectory parallel to the cliff in the middle of the lift zone.  once at the limit, turn back left, stabilize a trajectory parallel to the cliff, then drift progressively to the cliff until being again in the center of the lift area  Once at the other limit, turn right and repeat.  Perform 5 laps and then go land	-The glider should always be pointed in the 180° sector to the beach  -slight body shift in the harness always towards the beach  -Without radio contact for more than 30 sec, go land  -look where you want to go, don't stare at an obstacle you need to avoid	40		Fly into the cliff  Trafic	watch out for trajectory, never take a heading towards the cliff  any problem get away from the cliff	radio  radio
Make his auto-analysis  Understand the instructor's feedback  Plan for short and mid term	auto analysis quality  Ability to identify points to improve  Ability to identify own improvements during session and remaining points to improve	What is your opinion about what you did ? what did you see? what did you understand?  Instructor's feedback : -What was good -3 main points to improve (tracks check)		20				
				240				

## TRAINING A PARAGLIDING PILOT

Training a paragliding pilot is training him to:

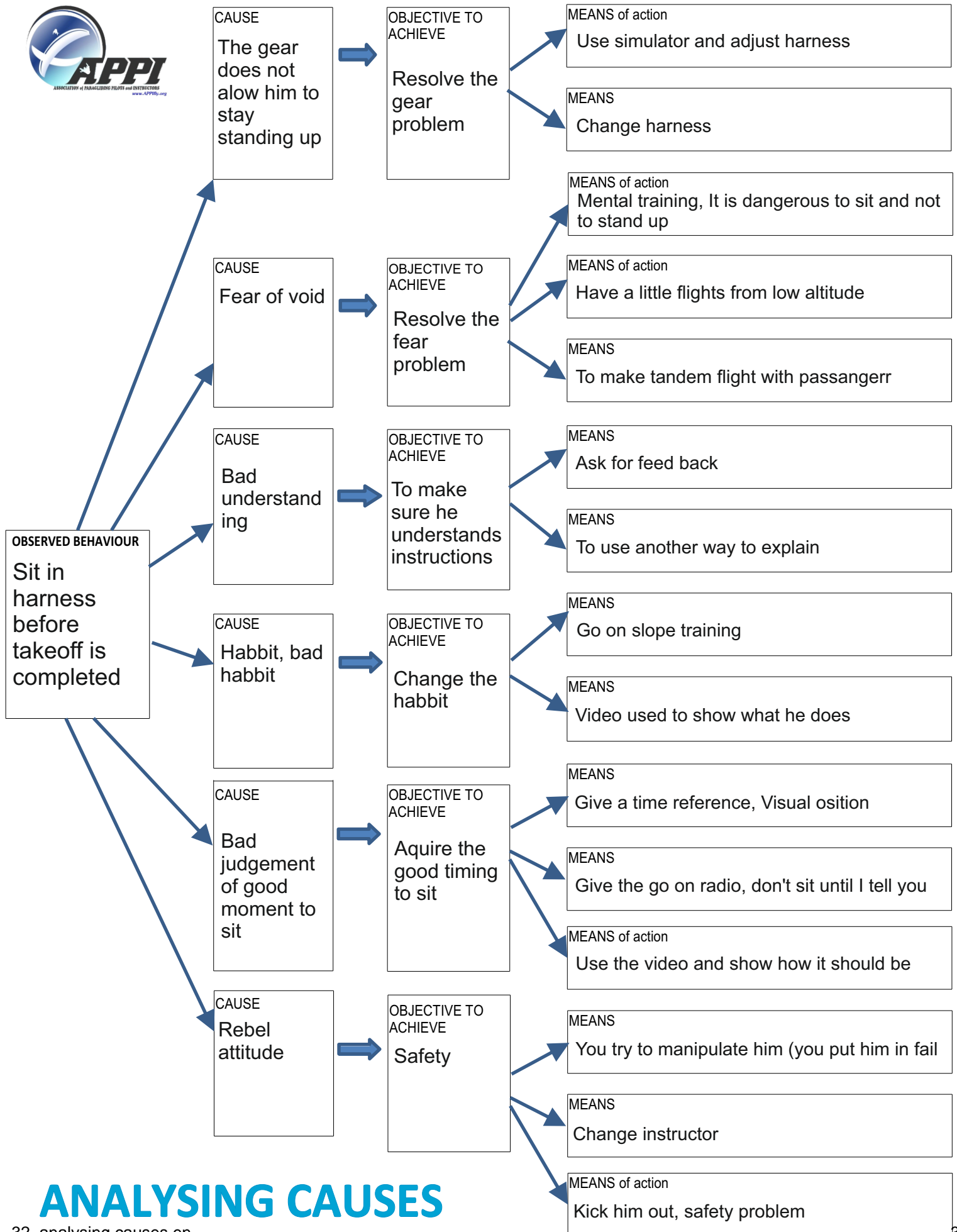
- fly a glider,
- handle safety for him and for the others,
- have the sense of responsibility when flying: each pilot represents the paragliding community towards those who don't know about paragliding

SUBJECTS AND SKILLS TO DEVELOP IN A PARAGLIDING PILOT TRAINING				
4 fields -> 3 angles	ANALISIS his relationship to flight environment	TECHNIQUE his relationship with the glider	PSYCHOLOGICAL ATTITUDES R. with himself	PRACTICE FRAME his relationship with the environment
<b>PRACTICE</b>	Observe, analyse and predict : -weather -aerology -terrain effect -other gliders path	Take off, and land How to pilot a glider feel the wing control incidents  <i>many instructors do only this, pilots want that</i>	have a clear conscience of his emotions, able to control them or respect them	Respect practice rules insurance, site rules,
<b>THEORY</b>	Aerology, weather aerodynamics flight regulation	Flight mechanics piloting gear ageing and maintenance	know emotions: stress, euphoria, Icaro complex	Know about rules and regulations, airspace know about local issues
<b>MENTAL ATTITUDE conscious of possibilities , respect of limits</b>	Accept to have no control of nature Accept limits given by nature	Be conscious of his level and respect it	know himself able to recognize his emotions, able to talk about it	Consequences of my actions respect other people

Practice : is the most easy, students come for that!

Theory : "its boring"

Mental attitude : can be felt as an aggression



# ANALYSING CAUSES



## CRITICAL FLIGHT PHASES: WHAT THE INSTRUCTOR HAS TO LOOK AT AND WATCH OUT

PHASES	SITE	GEAR	PILOT
PREPARATION	Choice of place / -wind direction -Obstacles -other pilots -Stop line	Adapted gear shape of the glider (horse shoe) Lines un entangled orientation/wind	Emotion stress Concentration focus
HARNESS SET UP	Evolution of aerology	Helmet preflight check, Leg straps, radio check, rescue check speed system	Stress focus feedback task
INFLATION	traffic traffic on takeoff Cycles, feel wind moment choice	symetry of rize Shape: leading edge, lines knots Speed of rize	feel symetry? Body and hand position (compact) what is he looking at? Coordination.
Control!	position/stop line	Amplitude of brake pitch position and speed, pressure in cloth when stopped	Look glider? Hand position
Acceleration	Trajectory / ground	Trailing edge / hands position stability of angle wing/pilot (pitch) speed of pilot and wing	Where does he look close or far way he runs
TAKE OFF	Trajectory / ground	equilibrium, pitch and roll	Where is he looking at? Body position way he runs
EXITING THE TAKE OFF	trajectory Traffic	Trailing edge body position	Get into the harness release brakes?

PHASES		SITE	GEAR	PILOT
FLIGHT	STRAIGHT	respect flight plan traffic	Trailing edge global attitude and roll harness position	Reaction time stress evidence (head & shoulders body position hands position and movements body movements check before turn coordination
	TURN	obstacles traffic flight rules		
	EXERCICES	evolution box traffic		
APPROACH		approx volume traffic wind direction obstacles	Trailing edge	Position, reactivity stress evidence keep control while standing up?
FINAL PHASE OF THE LANDING		Trajectory / ground traffic on landing wind direction and gust gradient	Trailing edge roll or pitch vertical speed	Body position where does he look leg position (ready to run)
LANDING		Altitude/ ground vertical speed moment of final braking terrain at touchdown	Trailing edge roll/ pitch vertical speed	What altitude 100% brake brake speed/ vertical speed legs on touch down tonicity and flexibility (damp) stress level take care equipment



## U1

- Cloth ageing: how to characterize it, what are the typical alerts, what is the life span of a paraglider, what are the main ageing agents, how do you care for your paraglider cloth.
- Lines aging: what are the two main line aging problems your glider may encounter, what materials are concerned in each of these cases. My glider lines are made of sheathed aramid, what should I do to control the aging, what are the criteria, what is the control frequency?
- My glider has 4 row (a, b, c, d), 5 bottom lines on each A riser, max total flying weight is 100kg. What is the max load per A bottom line in a stabilized straight line? What is the airworthiness criteria?  
Same question for a 2 liner with 3 A on each A riser
- Explain what is the trim of a glider, how can I change the trim in flight. Aging: what line material could cause the trim change, usually in what way does it move? What are the typical alerts of a wing out of trim? How do we proceed to control the trim, what are the criteria? What should I do prior to flying once the trim has been corrected?
- Reserve: 5 cases when you must throw your reserve directly. 3 family of situation you can encounter when it's time to throw, what throwing technique do you use in each case. How do you care for your reserve, what is the best technique to fold it?
- Should I fly my glider in the top, middle, or bottom of the weight range?  
My glider is B certified at the top of weight range and C certified at bottom of weight range, what could be the explanation? what is the connection with security in flight?  
My new tandem is 105-220kg certified, what should I pay attention to?  
My student has now 50 hours, he wants to buy a B glider (AR 6) "to progress", what should I explain him?
- How to set up a harness for a student? What are the benefits and disadvantages of pod harnesses?

## U2

- How does a paraglider fly? Explain aerodynamic force, lift, different drags, pressure center, global equilibrium of paraglider + pilot. Explain angle of attack and its limits
- What characterizes a stable and an unstable profile? Draw and explain. In turbulent conditions, as safety position I pull the brakes "contact +20% of brake travel". Advantages, disadvantages, conclusion. What simple guideline can I give to explain what is "active piloting"
- Pitch: what is aerodynamic and pendulum movement, draw the 3 sequences of pitch, the two borders, explain how to stop a pitch movement. Explain how to create and increase a pitch movement
- How does the paraglider turn. Drawing and explanation.
- Fine piloting: explain the 3 parameter that characterize wing movement, the 4 parameter that characterize command action. When the goal is to damp the movements of the glider, how should be the command be released? What is spiral neutrality, what to do?
- What are the 3 families of piloting mistakes? What are the possible reasons, consequences, and remedies?
- Negative wind gradient on landing, using vectors explain what are the 2 situations that can happen, what to do to prevent? How to react in both situations

### U3

- Explain the mechanism that creates wind on the globe scale. Explain breeze at the local scale
- Explain the birth of a thermal bubble and what happens when it rises in the atmosphere 1,2,3,4,5,6,7
- Analyzing a given skew-t, tell me about the situation, ceiling, cloudbase, development. What strategy would you adopt In flight, What can you say about that model?
- Explain the phenomenon of katabatik cascade, the Foehn phenomenon, the prisoner effect. Cases where they are dangerous?
- Explain what is the risk. What is the risk homeostatis? What actions can I take to lower the risk in my own practice? If I want to give a student or fellow 3 advices for safety what would they be? At the level of my flying community (club) what actions can I develop to improve safety.
- Stress: 3 stages, 4 strategy (coping), 3 times to deal with the stress
- Accident: main cause? Typical risky situations? Your Individual risk management strategy? . In flight I witness an accident, what should I do? I am about to land in the trees // in the water what should I do?
- Airspaces rules, visual flight rules?
- Using polar curve of the glider, explain the best air glide, best sinkrate. Explain best ground glide with face wind, with sink. How to figure out the best ground glide speed in flight?
- Transition strategy in XC, what defines the limits of the speed range I should use. What is the conclusion
- How can I evaluate my drift in flight? Using vectors explain what to do if I want to cross a valley with a good breeze, and arrive as high as possible on the other side no matter where I arrive?

### U4

- tandem operating: Responsibilities, insurances, obligations
- Main points of your tandem procedure
- mime Gear up passenger and pilot, give briefing (no wind, or strong wind), the 4 last steps before take off
- Influence of load on speed range. trim use at take off, in flight, at landing
- APPI rules tandem. My pilot harness has no seatboard, what is the point I should particularly check

### U 5 & 6

- Development, organizing and conducting courses, Pedagogy
- Takeoff guiding, landing guiding and instructor position
- Where does the instructor looks depending on the situation
- APPI system questionnaire

## Instructor final exam evaluation grid

**Master :**  
**date :**

**Instructor :**  
**place :**

### School inspection

Instructor's experience, years flying, years instructing, number of students

School status according to local laws

Instructor has valid insurance if available, and is an active APPI member

Waver signed by students, **students registered in APPI system**

**Gear check : quality of gliders, harnesses, radios, rescue, helmet... maintenance documented**

Site check : flying site, ground handling place, etc. any safety issue ?

Staff check : ressource available coherent with working site


### Theoretical course

Topic adapted to objective of the day and connected with practice that will follow

**Knowledge about topic**

Quality of explanations, drawings

Group attention management, time management


### Practical course preparation

Has used the APPI session tool since the workshop ? If weather could be an issue, has prepared another session in case weather is not suitable ?

Proper use of APPI pedagogic session tool, credible time management

Takes in consideration student competences ? Plan to use active pedagogy as much as possible ?

Coherence and quality of pedagogical progression (objective, sub objectives choice)

Safety in the choice of exercises and exercises sequence

Identification of the risk of each exercise, good safety instruction to avoid identified risk, good identification of reaction if identified risk happens


### Practical course on the field

Assesment of student stress level and means to lower it

Briefing : objectives, sub objectives and evaluation keys clearly explained to students. Safety instructions// feedback

Exercises : safety management, attention, anticipation, good reaction

Communication (clear, calm, feedback, reformulate..)

Ability to make student progress, to adapt exercises/pedagogy to student/terrain/conditions.

Debriefing : pertinence, gives axis of progression at short, mid and long term

Attitude, group attention management, time management

**Global safety management (exercises evolution, pertinent decision according to weather conditions, students mental state...)**


<b>Guiding</b>
<i>take off</i>
<b>Briefing about exercise . Last words : important safety instructions // feedback</b>
7+ safety points check
<b>Position on take off</b>
Radio procedure with guiding instructor
Focus on student trajectory until : terrain cleared + landing instructor clearance
<b>Ability to react in unexpected situation, pertinence of instruction</b>
<i>in flight</i>
Quality of guiding, understandable, precise, anticipation, voice tone
Own stress management
<i>landing</i>
Position on landing zone, quality of guiding, accuracy of landing
Student management after landing
<i>general</i>
<b>Safety management (safe guiding, pertinent decision according to weather conditions, students mental state...)</b>

optional	

<b>Tandem instructor check</b>
Awareness of APPI tandem requirements, procedures, evaluation documents, rules
Demonstrative and solid for APPI tandem safety procedures


<b>APPI system</b>
Has already registered/certified students ? Proof of exams given (theory, practice)
<b>Able to register, certify, modify student in APPI system</b>
Able to give exam using APPI tool, contract insurance, report accident
Able to order/print certification card, to find documentation (validation forms, manual...)
<b>Knowledge of APPI educational system requirements, validation rules</b>

	number of students validated in APPI :

<b>Documents</b>
At least NC tandem validated (featuring first aid certif, advanced siv, glider trim control, written tandem procedure)
Theoretical exam validated (at least 4/5 average on 6 open questions)
APPI system exam 60 questions
<b>Would you like to have this instructor work with you ?</b>


# Examination

## What do we look at?

### Instructor guiding

#### At Take-off

Weather check  
Takeoff assessment (safety)  
Glider's shape & location  
Stopline location

Briefing including:  
-Ref points  
-Last safety instructions (radio-fail)  
-Student's feedback asked

Last vital check 7+. Efficient radio check with attention to radio traffic

Instructor's position  
Traffic & cycles attention  
Clearance moment  
End of takeoff phase moment

Attention on student until handing over to landing instructor

Clear and appropriate instructions for a safe operation

Ability to react in emergency situation

#### At Landing

When getting in charge of student, LZ instructor makes sure he identified the correct pilot and radio communication is ok. Reports to TO.

Student awareness: from moment in charge

Quality of guiding

U approach -Altitude loss upwind, logical pattern

Upright moment, long final, accuracy  
Proximity at touch down  
Safety management  
Emotional attention, feedback asked

### Theory class

**Contents connected with the practice course**

**Correct, clear, concise**

**Adapted to public**

**Feedback asked**

### Course document

#### Upper part

Clear description of the situation  
Main objective,  
Student's requirements  
Environment requirements

#### Sub objectives

Sub objectives being concepts, not exercises.  
Missing sub objective?  
Sequence, progression chosen.

#### Evaluation criteria

Connected to sub objective.  
Pertinent, allow auto-evaluation

#### Exercises

Adapted to student's progression, state of mind and gear.  
Adapted to the site, and forecasted aerology.  
Pertinence of exercises sequence

#### Briefings

Clearly and completely written  
Usable by another instructor

#### Safety instructions

Good identification of the risks,  
Pertinence of the (max 3) safety instructions chosen.

#### Pedagogy

Teaching technique chosen  
Human factors taken in consideration?

### Course on field

#### General organization & management

#### General Briefing

Place, Efficiency  
Participative  
Connected with environment (adapt)  
Make final objective clear with clear (self) evaluation criteria  
General safety instructions  
Feedback asked

#### Student gets ready

Attention to student  
Specific exercise briefing: ending with safety points + Feedback  
Last check 7+ points  
Radio procedure

#### Instructing

Place Voice  
Instructions pertinence  
Efficiency. Anticipation.  
Danger awareness  
Safety management

#### Pedagogy:

As active as possible  
Ability to adapt exercises

#### Debriefing

Feedback asked  
Pertinence of given analysis  
Objectives short/mid/long term

#### Instructor's self analysis

Pertinence  
Identify real causes of failures

### Tandem exam fails

#### During preparation

Reserve check missing

#### Once ready for takeoff

Last 7 vital points check (missing pilots leg or karabiners)  
Passenger's feedback not asked  
Gliders look before inflate miss

#### Landing

Standup moment  
accuracy

#### During takeoff phase

Glider visual check before acceleration missing  
Decision line not respected  
Trajectory loss  
Release handles too close from terrain

#### In flight

Accuracy lack on exit axis  
Timed maneuvers: !chronometer is stopped once glider stabilized!

# Goals of APPI instructor course

Able to give a **theory** class

- technically correct
- clear and concise
- adapted to public

Able to **guide** a flight

- pertinent
- clear and concise
- adapted to objective (success / progress)
- ability to react in emergency situation

## Give course on the field

Safety management

Adaptation abilities      adapt exercise, course, pedagogy

Time Management

Observe, evaluate      pertinent analysis

Communicate      efficiency

Use the defined evaluation criteria      objective reached?

Use proper pedagogy      appropriate art of teaching

Conclusion      objectives at short, mid and long term

## Prepare course

Identify start point      student's state (knowledge, skills, emotional control, attitude)

Define objective      pertinent in the progression plan  
challenging but doable  
...& student's wishes

Know what is the art of paragliding      for that objective

Investigate      identify the concepts that must be mastered to perform the objective

Define a way      in terms of sub-objectives

Invent      exercises adapted to student's abilities, learning canals, terrain, conditions, gear

Define pertinent evaluation criteria      objective reached

Use proper pedagogy      appropriate art of teaching

## Key words

Take in consideration the human being (emotions)

Put yourself in the student's shoes

What is your objective? What is your intention?

Safety

## APPI progression: steps to validate

