



Instructor Bad Habits

EU ROTORS – November 2024

Jonny Greenall

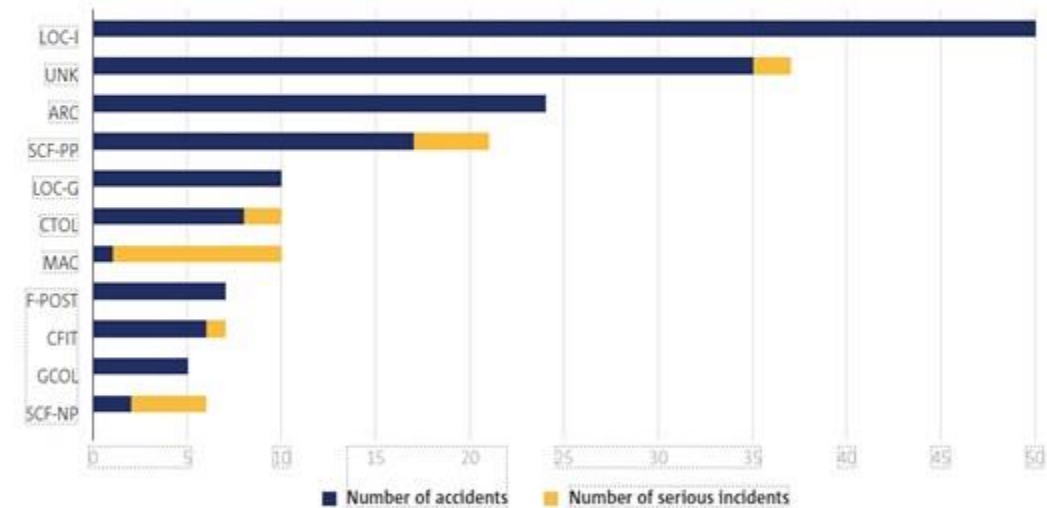
Balearic Helicopters

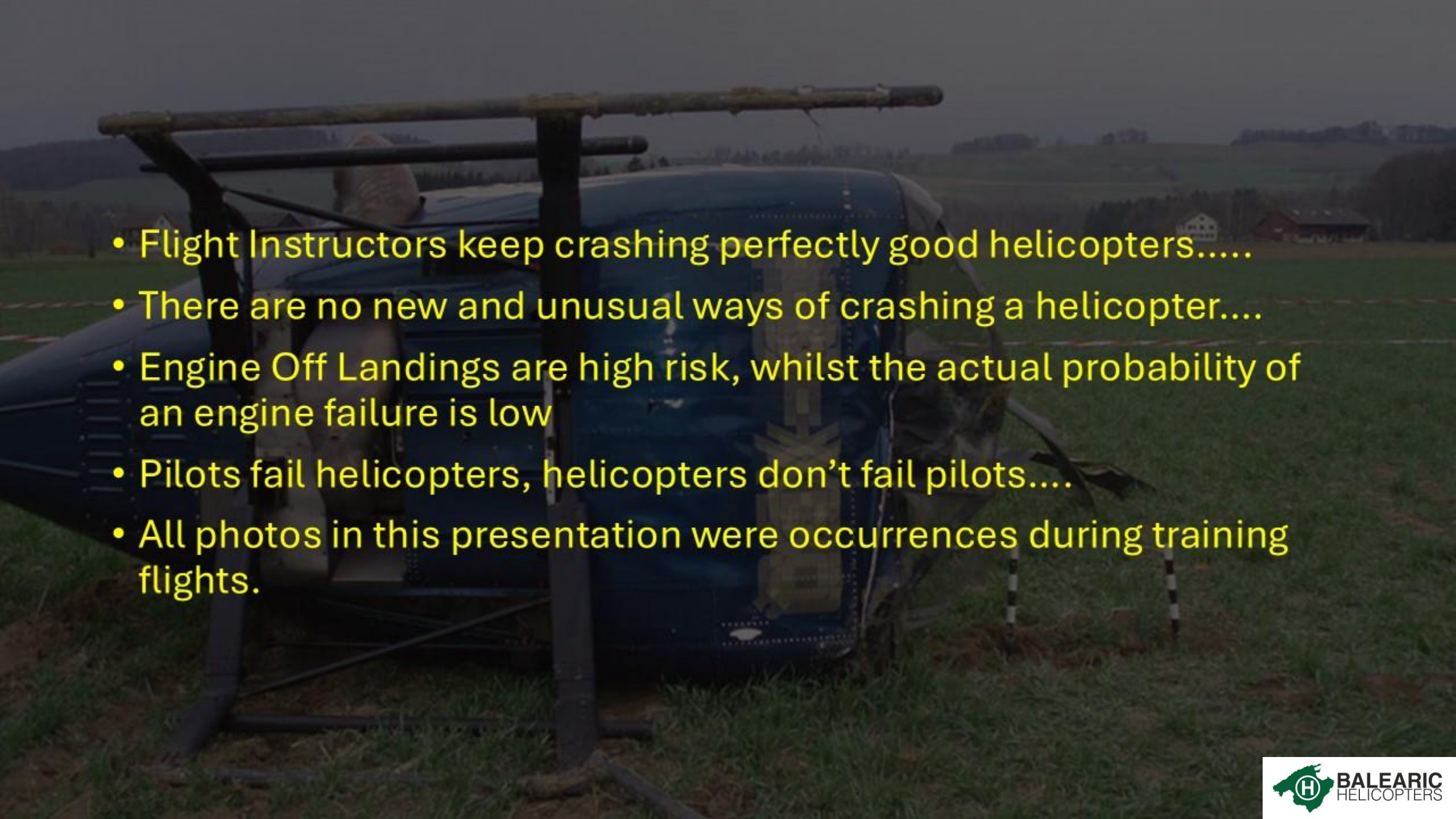
EASA SAFETY REVIEW 2024

- Loss of control in flight (LOC-I) emerges as the primary occurrence category for non-commercial operations, **with flight training missions being notably susceptible.**
- Notably, all occurrences categorized under LOC-I have resulted in accidents, highlighting their high-risk nature.

Occurrence categories

Figure 3.28 outlines the top occurrence categories assigned to the serious incidents and accidents in the past five years.



- 
- Flight Instructors keep crashing perfectly good helicopters.....
 - There are no new and unusual ways of crashing a helicopter....
 - Engine Off Landings are high risk, whilst the actual probability of an engine failure is low
 - Pilots fail helicopters, helicopters don't fail pilots....
 - All photos in this presentation were occurrences during training flights.

A photograph of a crashed helicopter in a desert landscape. The helicopter is orange and white, with its main rotor blades broken and scattered around it. The cockpit is open, and the interior is visible. The text "Ground brief....." is overlaid in yellow. In the background, there are sand dunes and a clear sky. To the right, there is a smaller, partially visible image of the same helicopter from a different angle.

Ground brief.....

GROUND BRIEF:

- GROUND BRIEFING:
- Always Always Always Ground Brief prior to flight
- A Flight Instructor cannot teach solely in the air there are too many distractions (flying, noise, lookout etc)
- The student cannot see you – only hear you. 65% of learning is visual clues, whilst as little as 30% is aural
- Ground Brief includes:
 - Safety Items
 - Lesson Objectives
- Assesses their knowledge and increases their confidence for the coming flight exercises

Not teaching Threat Error Management

NOT TEACHING THREAT ERROR MANAGEMENT:

- Flight Instructors often struggle to teach, or integrate, TEM. That can be because they were not really taught it very well early on, so don't understand the concept themselves. It can just be another aviation acronym... TEM, CRM, ADM, SA, IMSAFE, MATED, DODAR..... This can lead to:
- Reduced situational awareness, without TEM training, pilots may be less likely to identify potential problems, leading to reduced situational awareness and increased risk.
- Ineffective decision-making, without TEM training, pilots may be more likely to make poor decisions in critical situations, which can lead to accidents.
- Increased workload, TEM training teaches pilots how to manage their workload effectively, reducing the risk of errors.
- Culture of complacency and a lack of respect for safety. This can make it more difficult to identify and address safety issues, further increasing the risk of accidents.
- If you want to learn how to teach and integrate TEM let me know!



The Law of Primacy

LAW OF PRIMACY:

- Information learned first is often retained more effectively and for a longer period than information learned later. Instructors should introduce the most important or foundational concepts first to ensure that these ideas are well understood and remembered.
- First Impressions Last. The first exposure to information tends to create a lasting impression, making it easier to recall later
- Initial Learning is Strongest. The initial exposure to a concept or skill forms the basis for how that knowledge is built upon
- In flight training if a student is taught a procedure incorrectly at the start, it can be challenging to "unlearn" the mistake and replace it with the correct procedure.
- One of the DANGERS this can lead to is a pilot making an incorrect action under stress due to previous experience - for example - the fixed wing pilot learning to fly helicopters moving cyclic forward upon engine failure.
- Be Accurate from the Beginning. It's essential to provide correct information and avoid introducing errors or misconceptions early on because they can be difficult to undo later.

A dark blue helicopter is lying on its side on a green grassy field. The helicopter's main rotor blades are visible, and its landing gear is extended. The background shows a clear blue sky, some trees, and a few buildings in the distance. A red fire extinguisher is visible on the grass to the right of the helicopter.

Creeping excellence

CREEPING EXCELLENCE:

- Military Infantry Training Handbook defines Creeping Excellence as:
- ***"Do not expect more than is required or raise training standards based on opinion."***
- The instructor becoming frustrated with the student as the instructor demands a higher standard than the student can deliver at that time.
- Overcoming Creeping Excellence:
- By setting clear aims and objectives you can prevent standards from continuously escalating in a way that disrupts progress or efficiency
- Set clear objectives from the start of a lesson. Ensure the student understands the specific goals.
- Stick to Realistic Expectations



“Just one more”

“JUST ONE MORE”

- Pushing for "just one more" exercise at the end of a training session can lead to mistakes or poor decision-making, which could result in safety issues or improper execution of manoeuvres.
- Rushing through "just one more" manoeuvre might cause critical safety checks or procedures to be overlooked, increasing the risk of an accident or incident.
- If "just one more" is attempted and does not go well, it could leave the student demoralised as it will be all they remember of the session. Mistakes made at this point can reinforce bad habits, undo the progress made during the lesson, and possibly require additional time and effort in future lessons to correct.
- Ending a lesson on a high note, when the student has performed well and is not exhausted, helps build confidence and solidify the day's learning.
- The final stages of a flight lesson are often when both students and instructors are more prone to complacency.

The “Surprise Exercise”

THE “SURPRISE EXERCISE”:

- **Safety Concerns:** Flight training relies heavily on preparation and understanding of what to expect. Surprising a student with an unexpected exercise can cause confusion, hesitation, or panic, which can compromise safety, also known as the "Startle Effect". A student may not be mentally or physically prepared to handle an unplanned manoeuvre, especially if it involves an emergency procedure.
- **Undermines Confidence:** Students build confidence by mastering specific skills progressively. Introducing a surprise exercise could shake their confidence, especially if they are not able to perform the task well. This may leave them feeling frustrated or demoralized, which can impact their motivation and progress in future lessons.
- **Ineffective Learning:** For students to learn effectively, they need to be mentally prepared for the task at hand. Surprise exercises often take students off guard, causing them to focus more on managing their confusion or anxiety than on applying the skills they've been taught.
- **Reinforcing Bad Habits:** When students are confronted with an unexpected exercise, they may react with incomplete knowledge, especially if they haven't yet developed the necessary skills. This could lead to the formation of bad habits or incorrect techniques that may be difficult to correct later.
- **CAVEAT - When Surprises Might Be Appropriate:**
 - There are instances when surprises are part of training, such as simulated emergency procedures later in the program.
 - However, these are typically introduced in controlled conditions after the student has been briefed on the possibility of emergencies and is adequately prepared to handle them.
 - Once you have trained all the scenarios, towards the end of the course, you can say "Right Bloggs, from now on I may, at any point in the course, give you an emergency - you are to act appropriately....."

Negative Learning

NEGATIVE LEARNING:

- Negative learning in flight instruction refers to the process where students inadvertently develop incorrect habits or reinforce negative practices instead of learning the correct techniques.
- For example, an instructor flying with a student in bad weather may mean that, in the future, they fly in bad weather thinking that it is normal as they did it as part of their training.
- Safety Risks: Incorrect techniques can compromise safety and can lead to accidents.
- Skill Degradation: Students may find it hard to unlearn incorrect habits, leading to a longer training timeline and decreased overall skill proficiency.
- Misinterpretation of Procedures: Students might misinterpret standard operating procedures or emergency protocols, which can result in dangerous situations during flight.
- Impact on Teaching Effectiveness: Instructors may find it challenging to correct negative habits, which can create frustration for both the student and the instructor, impacting the overall effectiveness of the training.
- To mitigate the dangers of negative learning, instructors should:
- Correct Instruction: Always demonstrate high standards of TEM, decision making and correct flying techniques.
- Provide Clear Guidance: Emphasize proper techniques and procedures early in training.
- Build Resilience: Encourage students to practice skills with various scenarios to reinforce correct methods.
- Regular Feedback: Offer constructive feedback to help students recognize errors and correct them.



Showing Off – “Watch this!”



“WATCH THIS!”

- **Compromises Safety Flight:** training prioritizes safety above all else, and showing off can involve unnecessary risks. Performing aerobatic or aggressive manoeuvres without proper justification increases the chance of accidents or loss of control and damage to the aircraft.
- **Sets a Bad Example for Students:** Students look to their instructors as role models for proper flying behaviour. If an instructor shows off or performs risky manoeuvres, it can give the impression that such behaviour is acceptable or even encouraged.
- **This can lead to Bad Habits:** Students might try to imitate these dangerous actions when they fly solo or with others, thinking that it is part of normal or acceptable flying.
- **Damages Trust:** The student-instructor relationship is built on trust. Students need to feel that their instructor has their best interests in mind and is focused on providing safe, effective instruction. If an instructor engages in showing off, the student may lose confidence in the instructor's judgment and professionalism.

A photograph of a white helicopter with a yellow stripe on its tail, lying on its side in a grassy field. The helicopter's main rotor blades are broken and scattered around it. In the foreground, there are several yellow and purple survey markers. The background shows a line of trees. The text "Shut Up!" is overlaid in large, bold, yellow letters across the center of the image.

Shut Up!

SHUT UP!

- Occasionally, as an instructor you just need to shut up!
- An instructor talking too much during flight training can hinder the learning process and potentially compromise safety. Here are some reasons why:
- **Distraction:** Excessive talking can distract the student pilot from focusing on flying the helicopter, monitoring the instruments, and maintaining situational awareness.
- **Overwhelm:** Too much information at once can overwhelm the student, making it difficult to absorb and apply the knowledge effectively.
- **Reduced Practice Time:** If the instructor monopolizes the conversation, the student gets less hands-on practice time, which is crucial for skill development.
- **Reduced Confidence:** Constant corrections and interruptions can erode the student's confidence and hinder their ability to make independent decisions.
- **Safety Risk:** In critical situations, a talkative instructor might delay critical instructions or actions, increasing the risk of an accident.
- Therefore, a good flight instructor should strike a balance between providing clear guidance and allowing the student to practice independently. They should focus on providing concise and timely feedback, and avoid unnecessary chatter.



Being too close to the
controls...

BEING TOO CLOSE TO THE CONTROLS...

- When the instructor is too close or on the controls all the time, interfering whilst the student is trying to fly
- Dependency on the Instructor: If instructors consistently take over control, students may become overly reliant on them, hindering their ability to develop independent flying skills and judgment.
- Reduced Confidence: constantly on the controls can lead to diminished self-confidence in students, making them less likely to trust their abilities, which is crucial for decision-making in flight.
- Limited Skill Development: Students may miss out on essential practice opportunities that contribute to skill acquisition and retention, resulting in incomplete training and readiness for real-world flying.
- Decreased Situational Awareness: When instructors overfly students, it can lead to a lack of exposure to critical decision-making situations, limiting the student's ability to develop situational awareness and problem-solving skills.
- Poor Performance in Emergencies: In a real-life emergency, a student who has been overflown may struggle to respond appropriately due to a lack of experience in handling the aircraft independently.

A silver helicopter is parked on a dry, grassy field. The main rotor blade is broken and lying on the ground in front of the helicopter. The background shows a clear blue sky and a distant power line tower.

Being too far away from the
controls...

BEING TOO FAR AWAY FROM THE CONTROLS...

- Complacency and over confidence in a student can lead to times where the instructor is too far away from the controls, with insufficient time to react, or take control, in the case of a student error. Especially when operating close to the ground, take off, landing, autorotations and emergency procedures.
- An instructor should be near the controls at all times during flight training for several safety-critical reasons:
- Quick Response to Emergencies: In the event of an unexpected emergency, the instructor can quickly take control of the aircraft to mitigate the danger and ensure the safety of both the student and themselves.
- Guidance and Correction: The instructor can provide immediate guidance and corrections to the student's actions, ensuring they are flying safely and efficiently.
- Demonstration of Proper Technique: The instructor can demonstrate proper techniques and manoeuvres by taking control of the aircraft, allowing the student to observe and learn.
- While it's important for the student to have ample opportunity to practice independently, the instructor's presence near the controls is essential for maintaining safety and facilitating effective learning.

Overflying a student

OVERFLYING A STUDENT (FATIGUE)

- As a poorly paid (peanuts per hour, flight time only, no pay for ground school, travel, hour building to get to the next "proper job" etc... a completely separate Rant of mine, but not for here today!) flight instructor you might feel flying longer than possible to help fill the wallet might be a good idea, it's not....
- Early signs to look for:
- HEARING – they stop listening and responding
- SPEECH - the student stops making coherent sentences
- FEET – they start to yaw / fly out of balance
- Flying with a fatigued student can pose several serious risks and challenges in flight instruction. Fatigue can significantly impact a student's performance and safety, both for themselves and for the flight operation as a whole. Here are some dangers associated with flying a fatigued student:
- Impaired Judgment: Fatigue can lead to decreased cognitive function, making it difficult for students to make sound decisions in critical situations.
- Reduced Concentration: A fatigued student may struggle to maintain focus on multiple flying tasks, which can lead to errors in handling the aircraft or missing important information.
- Slower Reaction Times: Fatigue can slow reaction times to changes in the flight environment, which can be dangerous, especially during complex manoeuvres or in emergency situations.
- Decreased Situational Awareness: Fatigue can impair a student's ability to remain aware of their surroundings and the aircraft's performance, increasing the risk of dangerous situations developing unnoticed.
- Inability to Learn: Fatigue can hinder the ability to absorb new information and skills, making training less effective and prolonging the learning process.
- Negative Training Habits: Under fatigue, a student might resort to unintentional negative training habits, reinforcing poor techniques that could be difficult to correct later.
- To address the risks of flying with a fatigued student, instructors should:
- Assess Readiness: Evaluate the student's physical and mental readiness before flight. If they show signs of fatigue, consider postponing the lesson.
- Encourage Rest: Promote the importance of adequate rest before flight training, emphasizing the impact of fatigue on performance.
- Limit Flight Duration: If flying is necessary, consider shortening the flight time to reduce fatigue-related risks.
- Conduct Ground Training: If a flight is not advisable, utilize ground training to build knowledge and skills in a less taxing environment.

A photograph of a helicopter crash site on a grassy field. The helicopter is on its side, with its main rotor blades and tail boom visible. Two emergency responders in high-visibility vests are standing near the wreckage. The scene is overcast.

Character assassination

CHARACTER ASSASSINATION:

- The debrief can be just as important as the preflight brief. It can help improve a student's knowledge, clear up any mis-understandings, and reinforce TEM and objectives reached, or required for the next flight session.
- Keep the debrief to major points of learning and avoid chronological debriefing. Always end the debrief on a positive note.
- Avoid Character Assassination:
- Provide Constructive Feedback, Not Personal Criticism
- Private Feedback, Public Praise
- Use Encouraging Language
- Avoid Comparisons or Labels
- Maintain Professionalism at All Times
- Do NOT use sarcasm, mockery, or jokes at the student's expense



Further Reading:
ESPN-R:

HE5 Risk Management in Training

HE11 Training and Testing of Emergency
and Abnormal Procedures in Helicopters