The FAA Safety Program Promotion Office (SPPO)
FAA Safety Team – FAASTeam
Results of Discussions Held During the 4th Quarter FY 2017 CFI Forum

Note: This report can be found in the FAASafety.gov Library in the Flight Instructor Resources category.

https://www.faasafety.gov/gslac/ALC/lib_tableofcontents.aspx

Background:

The FAA Safety Team CFI Forum is a live program presented quarterly and dedicated to continuing education for Flight Instructors, Designated Pilot Examiners, and pilots who are interested in becoming instructors. The 4th Quarter FY 2017 Forum asked more than 350 CFIs in 38 venues for input on topics of concern to flight instructors. They were asked to collaborate on site to select best instructional practices associated with each of 5 Topics:

- Airman Certification Standards
- Best instructional practices for avoiding Loss of Control events.
- Best instructional practices for safe operations in the National Airspace System
- Ranking of common General Aviation accident precursors in order of importance to CFIs
    - Best instructional practices for mitigating each identified precursor
- General thoughts and observations on current CFI issues.

Four precepts appeared throughout the best practices discussions. They are:

Lead by example – This best instructional practice, cited in every topic discussion, acknowledges Flight Instructors' responsibility to be role models for their students. This was expressed in many ways but each discussion group agreed that instructors must demonstrate and meet the same standards of compliance and performance that they demand of their students.

Employ scenario-based instruction – Equally mentioned was the concept of scenario-based instruction. CFIs realize that students are better prepared to perform as pilots in command if they can successfully perform in holistic ground and flight scenarios.

Practice Risk Management – Flight Instructors are encouraged to practice and teach risk management throughout the training process. The respondents strongly suggest the use of risk management aids such as checklists, personal minimums identification, and flight risk assessment tools (FRATS).

Don't neglect the basics – The respondents acknowledged the burgeoning volume of aviation equipment and computer applications used in GA flight management but they were clear that a firm foundation of aircraft control must be established and maintained to ensure safe flight operations. They agreed that there are times when pilots must put distractions aside and "Fly the Aircraft First"

Input results and selected comments are presented below. For a listing of all input, please see the Appendix (attached).

Airman Certification Standards:

- Are Airman Certification Standards adequate to assess pilots' ability to operate safely?
  - Yes = 304 (87%)
  - No = 46 (13%)
- What are the top 3 things that work well with ACS?
  - Knowledge and Practical Test integration
  - Special Emphasis Areas Integration
  - Flight Risk Assessment
- What 3 things most need improvement?
  - Slow Flight task
  - Coordinate Knowledge Test report with ACS
  - Return to previous Special Emphasis Areas presentation

Most of the instructors who responded to this topic were satisfied that the ACS are adequate to determine pilot's ability to operate safely in the National Airspace System. Likewise, most applauded the integration of Knowledge and Practical Test standards within a single document. They were critical of the Knowledge Test Report coding though, and look forward to better coordination in the future. Some respondents appreciated the integration of Special Emphasis areas but nearly as many asked for a return to the PTS paradigm of listing those areas separately. The inclusion of Risk Assessment in the standards was welcomed. Predictably, some instructors still consider the standards for slow flight to be inadequate or confusing. Slow flight was the most often cited area in need of improvement. Some respondents were concerned that phase check pilots and some DPEs were not referencing ACS in their evaluations. Others mentioned confusion with respect to combining tasks i.e.:

> "….. it makes the examiner come up with real world scenarios for the students to think about and make good aeronautical decisions about. The problem is very few, if any, stage pilots actually follow the ACS and do that.

"….. should be clearer about whether maneuvers can be combined (DPEs are combining soft-field landing with soft-field takeoff and asking applicant to hold nose off from touching runway throughout)"

Loss of Control:

Loss of Control continues to be the accident precursor responsible for the highest number of General Aviation fatalities. We asked the Forum respondents to list the top 5 best instructional practices to address loss of control. Selections from the responses include

1. Emphasize stick and rudder skill and proper flight control coordination throughout training. Insist on proper coordination at all times.
2. Construct scenarios that can lead to loss of control and that force students to deal with distractions.
3. Don't teach students to "salvage" landings but rather to plan for and execute go-arounds. Applaud go-around decisions and demonstrate your willingness to go around.
4. Promote upset and spin training for all students.
5. Conduct some training at aircraft gross weight so that students can experience decreased performance.

Stick and rudder skill development and proficiency are recurrent themes in Loss of Control event mitigation best practices. The respondents acknowledged the complex nature of General Aviation aircraft, avionics and airspace. But they are quite clear on the necessity to assign top priority to maintaining aircraft control.

Safe Operations in the National Airspace System:

Pilot Deviations, in the air and on the ground are a concern across the country. We asked the respondents for best instructional practices to ensure safe and compliant operations in the NAS.

1. Insist on comprehensive airspace knowledge.
    a. Require students to plan each flight carefully – even if it's a familiar route.
        i. Review airspace, NOTAMS and TFRs.
2. Expose students to a variety of flight environments. This is especially important for pilots who learn to fly at non-towered airports and/or in rural areas.
3. Use all available resources
    a. Encourage Flight Following and communications with Air Traffic Control and Flight Service.
    b. Copy and read back all clearances and ATC instructions.
    c. Request progressive taxi instructions for complex routes or when an unexpected route is assigned.

4. Use current charts and databases.
    a. Understand how to use all available navigational equipment;
        i. but don't focus on nav equipment at the expense of other pilot tasks.

Most Forum respondents cited comprehensive airspace knowledge as the foundation for compliant operations in the National Airspace System. Equally important to the Forum participants was exposure to a wide variety of operational environments. It stands to reason that flight students will be more comfortable operating in familiar environments but, as rated aviators, they'll need to be proficient in navigation anywhere in the NAS. Exposure to diverse environments is the obvious answer but just getting from the training airport to a different airspace and air traffic environment can be expensive. Constructing flight training scenarios that allow students to perform in a variety of airspace/air traffic environments is an effective means of ensuring compliant operations in the NAS.

There were a few mentions of Pilot/Controller seminars and events where students can learn about ATC processes and expectations and, hopefully, controllers can better appreciate the challenges that pilots face. These events have been successful in the past and should be continued.

No mention was made of simulation technology for teaching operations in the NAS but it could be of value – especially if ATC communications can be practiced while flying navigation scenarios. NAV equipment simulation is particularly effective for learning how to manage glass cockpits. Most NAV equipment manufacturers make simulations of their products available to pilots and Flight Instructors. Pilots who well versed in equipment management have more time to devote to situational awareness.

Note: Pilot Deviation investigations often find that pilots are relying on modern moving map technology – either installed or mobile displays – to steer clear of airspace they're not authorized to enter. This is a good practice but not if you're so close to the airspace you're trying to avoid that a momentary distraction can put you over the line. We recommend a mile or two buffer for a less stressful navigational experience.

Accident Precursor Ranking:

The Forum respondents were asked to rank 5 possible accident precursors in order of significance. They were also allowed to include a sixth precursor of their choosing if they wished. The 5 precursors, ranked by the Forum participants, are:

1. Airplane handling skill (proficiency)
2. Hazard Identification and Risk Assessment
3. Pilot health and state of mind
4. Weather knowledge and experience
5. Pilot personality

In light of the response to the Loss of Control mitigation topic above, it's not surprising that the respondents felt that airplane handling skills were paramount accident precursors. Following closely are hazard identification and risk assessment, pilot health and state of mind, weather

knowledge and experience, and pilot personality. There were numerous 6th precursor suggestions but none appeared more frequently than the 5 precursors above. Next we'll look at suggested best instructional practice mitigations for each precursor on the list.

Aircraft Handling:

1. Devote more time to aircraft control basics
    a. Control coordination
    b. Stalls and slow flight
        i. Dutch rolls, falling leaf
        ii. Spins
2. Meet stabilized approach criteria or go around
3. Discourage automation dependency. Devote more time to looking outside
4. Challenge students with a variety of landing surfaces and wind conditions
5. Teach students to prioritize (fly the aircraft first) and to manage distractions

Flight Instructor best practices with respect to Aircraft Handling acknowledge the number and complexity of flight tasks that all pilots must perform and instructors must teach. Although not expressed directly, the respondents suggested that higher priority should be assigned and more training time should be devoted to aircraft control. They stress the importance of flight control coordination and some suggest that automation should be used less rather than more frequently. This is somewhat at odds with recent recommendations to use automation to reduce pilot workload associated with aircraft control. In keeping with the "use it or lose it" philosophy, the respondents are suggesting that more hand flying will be efficacious in maintaining aircraft control proficiency and thus reduce the number of loss of control events.

As with the Operations is the NAS topic above, respondents suggest that Flight Instructors should challenge their students with a variety of flight and landing surface conditions to build confidence and proficiency in assessing and dealing with disparate flight and ground environments.

Hazard Identification and Risk Mitigation:

1. Maintain situational awareness at all times

2. Use Risk Assessment processes and aids
    a. Checklists
        i. PAVE, PPP, IMSAFE, GUMPS, etc.
        ii. Personal Minimums checklist
    b. Flight Risk Assessment Tools
        i. FAAST FRAT for PC and Apple computers

ii. Flight Risk Assessment Tool (James Williams) App for Apple iOS devices

3. Start early and lead by example
    a. Introduce risk management early in the training process.
        i. Demonstrate risk management for initial flights and make students responsible for the process when they are able.
    b. Show your students that you consider hazards and risks for every flight
        i. Ask students for their take on a situation; then offer your observations and conclusions.

Risk Management is a new paradigm for many students and even some Flight Instructors who may never have used a formal process of hazard identification and risk mitigation. That said, it's important for Flight Instructors and their students agree on 3 definitions and one process. The definitions are:

- **Hazard …….** A condition or circumstance that could negatively affect the achievement of an objective
- **Risk …**……..The likelihood that a given hazard will affect the achievement of an objective
- **Risk Management ……** The elimination or mitigation of hazards to an acceptable levels of risk

The risk management process requires that pilots know their capabilities and limitations. It acknowledges the fact that capabilities will vary with human performance factors such as proficiency, stress, health status, and fatigue. Risk management begins with the flight planning process and is constantly informed by situational awareness. Pilots should maintain a state of inquiry; posing questions that compare pilot capabilities and limitations to mission requirements. Some questions that might be posed include:

- What weather conditions will prevail at my destination on arrival?
    - What hazards are likely to be associated with those conditions?
        - What is the risk that those hazards pose to safe completion of this flight?
    - Are my equipment and capabilities sufficient to safely deal the expected conditions?
        - What could I do to make a successful outcome more likely
    - Is my planned alternate still the best choice if the destination becomes untenable?
- How much fuel will I have at the destination and for how long can I fly after arrival?
- What are the next 3 things that need to happen on this flight?

Instructors can lead by example by posing situational awareness questions such as those above and by encouraging their students to pose questions of their own. Note that the same questions will be asked and answered several times before and during a flight. It's also useful to conduct risk management in post flight briefings as well. Here we're asking, "How well did my hazard identification and risk mitigation match the conditions encountered on this flight?"

Pilot Health and State of Mind:

1. Teach stress awareness and management. Using the IMSAFE and PAVE checklists and FRATs was suggested by many respondents. CFIs are enjoined to look for signs of stress in their students and in themselves.
2. Fatigue and illness were cited less frequently than stress but they were acknowledged as important factors to be aware of and to inform pre-flight and in-flight decision making activity.
3. The respondents also suggest scenarios that approach task saturation. The rationale being that students need to see how performance is degraded as task saturation develops and to learn how to shed non-essential tasks in order to devote attention to aircraft control.
4. The respondents considered it imperative for CFIs to lead by example by cancelling or modifying training plans to accommodate CFI illness, stress, or fatigue.
    a. Several responses discussed "optimal task loading". This concept acknowledges that task loads that are too high can contribute to pilot performance errors while low task loading can promote complacency. They define optimal task loading as a balance between overwhelming and boring.

Weather Knowledge and Experience:

1. As early as possible in the training process, make the student responsible for weather information and weather decisions.
    a. Listen to the student's weather assessment and decisions before offering your own insights.
2. Try to fly in as many weather conditions as possible consistent with safety.
3. Work with students to develop personal weather minimums. Assess and refine these minimums as training and experience progress.
4. Use multiple weather information sources and verify that the information is timely and correct
    a. Make sure students are comfortable with oral weather briefings from Flight Service.
5. Lead by example through making conservative weather decisions.

Most of the respondents were quite experienced weather pilots and their best practices acknowledge the necessity of making the student responsible for weather decisions early in the training process. This was considered essential to prevent reliance on the Flight Instructor's weather knowledge. The CFIs also considered it important to expose students to as many diverse weather conditions as possible during training and to accurately assess the impact on the mission exerted by weather conditions.

Pilot Personality

1. Lead by example. Exhibit a professional, respectful and consistent demeanor. Students will emulate their Flight Instructors and they will follow the examples you set.
    a. Acknowledging the compliance imperative will do much to temper anti authority thinking.
2. Screen for and address hazardous attitudes.
3. Don't hesitate to discuss student personality traits and temperaments that can compromise aeronautical decision making and pilot performance.
    a. Identify those students who are used to assuming professional risk and discuss acceptable risk in an aviation context.
4. Be cognizant of any interpersonal relationship problems between you and your students. If these are inhibiting training – suggest a change of instructor.
    a. In any case consider having students fly with a different instructor to confirm or modify your assessment.

A number of responses confirm the difficulty of dealing with personalities and temperaments. The dynamic always consists of at least two personalities that may, at times, appear to be on divergent courses. The respondents are clear that personality and temperament assessments, and – if necessary, adjustments are every Flight Instructor's responsibility. They do suggest early intervention when necessary; rather than letting a conflict mature.

Final Thoughts

There are many worthwhile responses to this topic and readers are invited to view them in the Appendix. It seems that the respondents felt the exercise to be worthwhile and we hope they find value in the aggregate results. In their final thoughts, respondents acknowledged the emergence of Technically Advanced Aircraft and Avionics and the changes those technologies have made in General Aviation operations. One respondent warned against abdicating pilot judgement to technology. Interestingly, some took one more opportunity to enjoin Flight Instructors with the responsibility to Lead by Example and to participate in continuing education for CFIs.

The FAA Safety Team wishes to thank the CFI Forum Flight Instructors for their dedication to aviation education excellence and for their willingness to share their insights and best flight training practices.

Appendix - Issues & Best Practices Feedback from FY 17 4th Quarter CFI Forum

Are the ACS Adequate to assess pilots' ability to operate safely?	**Yes** **304**	**No** **46**	
	What are the top 3 most needed improvements to ACS?		**What are the top 3 things that work well in ACS?**
Location	**Answers**		
Phoenix, AZ – 1st Session	1. Instrument ACS: very limited info on IPC checks and the Advisory Circular on IPCs is not referenced in the ACS 2. Variance between how DPEs test slow flight - this should be addressed clearer with DPEs 3. Should be clearer about whether maneuvers can be combined (DPEs are combining soft-field landing with soft-field takeoff and asking applicant to hold nose off from touching runway throughout)		1. New slow flight standard is good practice 2. Better organization (no big intro section like PTS) 3. Like the knowledge and risk management elements for each task
Phoenix, AZ – 2nd Session	1. Implementation is non-uniform (DPEs sometimes still using PTS?) 2. Difficult to identify how many questions to ask per task. 3. Not enough systems knowledge required; it also should add a task addressing ways to keep current (WINGS; self-improvement)		1. The practical test corresponds to the knowledge test; antiquated questions removed. 2. Good integration of risk management elements. 3. Long intro section removed.
Scottsdale, AZ	1. Attendees miss the special emphasis items being in front (but do like the risk management items being added to the tasks) 2. Need to link the reference documents to the elements better		1. Better detail 2. Better outline to prepare 3. Good guidelines & requirements for Instrument Proficiency Check
Albuquerque, NM	1. Guidance on the appropriate use of technology (when to use or suspend from use of autopilots, GPS guidance or moving maps);		1. Scenario based training illustrates real world situations;

	2. To allow appropriately directed re-training (teaching), the missed questions on the Knowledge Test Report should be displayed in the ACS format; 3. No additional responses.	2. Using the Standards to guide the training; 3. Tying the knowledge testing to the practical training.
Santa Teresa, NM	1. The ACS format is not used on the Knowledge Test Report which make correlation difficult; 2. There needs to be a list of maneuvers and the standards for each maneuver to be quickly referenced; 3. No additional responses.	1. The new format make the Areas and Task easier to teach; 2. Risk Management is included in the Areas and Tasks; 3. No additional responses.
Holloman AFB, NM	1.The Knowledge Test Report must provide the questions missed codes in the ACS format in order to be useful; 2. There should be a smart phone ACS app. for the tech savvy students to use; 3. No additional responses.	1. The emphasis placed on aeronautical decision making; 2. The clearly delineated standard; 3. The relationship between the knowledge and the practical portions are more readily apparent.
Fargo, ND	1.More definition on the standard for the task 2. Still confusion from speeds used for slow flight in ACS vs. PTS, horn on vs. off, depending on the mission or task	1.Expanded Knowledge areas 2.Emphasis on risk management, Runway incursions, more explicit definitions in each area of operation, Special Emphasis included in the task or each area of operation. 3. Larger book format easier for older generation to use 4. nice to see the written linked to the ACS
Pittstown, NJ	1. some instructors don't like the slow flight task as written prefer flown slower 2. some of the tasks need to be simplified	1. updated test questions 2.ACS is more specific than PTS

	3. New ACS is taking pilots away from basic flying skills	3. special emphasis items are integrated
Palo Alto, CA	1. Too long 2. Too comprehensive 3. Too much structure/complexity forces long check rides	1. Safety Emphasis 2. Adds Risk Management 3. Adds Knowledge
Searcy, AR	1. Too complex standard for Risk Management for Private Pilot 2. Define references better - example V1 Nav - 14 CFR Part 61. At least list the sub paragraph ref and if a handbook; list the chapter; list handbooks by name and not handbook number 3. Breaks one maneuver into to many different tasks	1. Defining Knowledge with written and practical 2. Knowledge & Skill breakdown - can fine tune 3. Better organized than PTS
Teterboro, NJ	No responses	No responses
Sanford, NC	1. Deficient subject areas found on Knowledge Test are not keyed to ACS. PCT codes are too broad. 2. Need method to identify risky personality. 3. Lack of completion standards for altitude of commercial steep spiral.	1. ADM pieces inline and better organized 2. improved description of criteria for stall recognition and recovery 3. Description of emergency descent
Santa Rosa, CA	1. Bring back list of special emphasis areas (up front) 2. Consistency of application of ACS by examiners 3. N/A	1. Helps in evaluating student readiness for check ride 2. Adding the knowledge portion is good, helps keep the student focused and aware of what is important for each task 3. Clearly shows relationship between elements of tasks
Fletcher, NC	1.Slow Flight	1. situational awareness 2. decision making

		3. scenario based
Norfolk, VA	No comment – ACS works well	1. Helps instructor teach understanding 2. Helps prepare lesson plans. 3. Prepares students for what they need.
Philadelphia, PA	1. Don't call slow flight slow flight. Call it minimum controllable airspeed. 2. Stall and stall recovery should stress minimum loss of altitude after stall recovery. 3. Shorten ACS and remove repeated areas.	1. Knowledge specific about real world issues 2. Instructor guidance 3. Check Lists
Cedar City, UT Southern Utah University	1. Add a checklist of aeronautical requirements for cert. 2. Place a personal minimums review in ACS to review with examiner. 3. Test at the application and correlation level on the written.....many questions are useless rote knowledge.	1. Codes if they work 2. Shorter check ride if written high score. 3. Organization
Salt Lake City, UT	1. Cockpit size printing. 2. Aerodynamic task should have its own section. (Part 61 students are disadvantaged. Large subject matter for one, line item. (……should consist of at least 15 line items). 3. If one skill item is missed but the other categories are met it still will be considered a fail.	1. Very Detailed. 2. Breaks it down into risk. 3. Gives examiner ability to see knowledge of maneuvers on ground and in air.
Logan, UT	1. More guidance on the transition from PTS to ACS. CFI is still under PTS but rely heavily on the ACS for Private and Commercial for teaching. A bridging document would be nice since the CFI ACS is not available yet. 2. Slow flight.	1. Three-part format is good with the knowledge, skill and risk with good definitions. 2. Format easy to read and understand. 3. Special emphasis areas integrated and better defined

Provo, UT	1. Still has many standards focused too much on too specific of skills/tasks 2. Too much room for DPE interpretation, i.e. one DPE to the next can be extremely different in their standards. 3. Less-stringent parameters for each task in terms of setup, entry, exit, altitudes, etc. in order to make it easier to test the tasks in a scenario format where multiple things can be evaluated simultaneously.	1. Critical thinking/Aeronautical Decision Making evaluation. 2. Integration with written test. 3. Evaluation of pilot skills
Fairbanks, AK	1.FY16 addresses all of the fundamentals of PP better than the stripped down version of the FY17 version. 2. Does the student meet the minimum standards, and should they actually be allowed to fly. The FY16 version was much stricter on the students and was better at determining which students should pass or not. 3. The new ACS is better than the old PTS	1. The ACS has a lot of specific line items to address the students' processes and procedures.
South Bend, IN	1. Private and Commercial ACS - Maneuvering during slow flight task does not test flight in the region of reverse command. 2. Commercial ACS does not require a full stall. Only an approach to stall and recovery. 3. No response	1. Correlation of Knowledge Test items and Practical Test Elements - when implemented 2. Integration of Special Emphasis Items 3. No response
Spokane, WA	1. Knowledge test code integration. 2. Provide a way to provide feedback for improvement/issues to the knowledge testing branch. 3. Better reference descriptions .	1. Format Integration 2. Risk Management Elements 3. Special Emphasis Items Integration

Ann Arbor, MI	1. Slow flight - disconnect between that and minimum controllable airspeed. Needs to be like the PTS was. 2. Needs to be better at encouraging authentic assessment. 3. Needs to encourage to do more than what is in ACS. Teaches the test which does not relate to real world flying.	1. Spells out Knowledge area items 2. Spells out Risk Management items 3. Exact Skills and tolerances spelled out well.
San Diego, CA	1. Not happy about slow flight changes 2. It would be helpful if ACS was linked up to Flight Training Handbook 3. Multi Engine Inadequate & Single Engine Aerodynamics (spread out)	1. Coding Method a plus 2. Knowledge Test 3. Linking Risk Management
Cheyenne, WY	1. Not happy about slow flight changes 2. It would be helpful if ACS was linked up to Flight Training Handbook 3. Multi Engine Inadequate & Single Engine Aerodynamics (spread out)	1. Yes, to a degree. 2. Encourages more thorough Check ride prep. 3. New changes, new learning.
Grand Forks, ND	1. Because it makes the examiner come up with real world scenarios for the students to think about and make good aeronautical decisions about. The problem is very few, if any, stage pilots actually follow the ACS and do that. 2. ACS doesn't require multi engine aerodynamics to be covered for multi add-on's and overall require less to be tested on which is a good and bad. Lower amount tested in my eyes means more errors later. 3. For the ACS questions on students FAA written knowledge exams, going over deficient areas is still quite cumbersome. Many times	1. I think it gives a much clearer requirement of pilot skills, knowledge, and tasks needed to become a pilot. 2. Each task description places appropriate emphasis on safety, and covers a sufficiently wide range of factors.

	I'm reviewing with students and they don't remember the question they got wrong or why they got it wrong. As an instructor, all I'm given is a key (PLT codes) and I just have to reteach certain things that they might already know and never cover the actual information they don't know. 4. The bare minimum number of elements we are supposed to cover is usually not adequate enough to fully evaluate a student's readiness for a certificate. I like how the ACS gives us the flexibility to test any or all of the elements so that we can tailor an oral to an individual applicant, but I've noticed examiners are sometimes abusing this by having the mindset of "since the test CAN be as short as possible, it NEEDS to be as short as possible." The majority of applicants need the oral component to be longer than 1.0 hour in order for the examiner to have enough information to make a decision. Second, with the standards for stalls going down to "impending" only for the Commercial ACS, I have noticed that this area is becoming kind of a joke to applicants. Usually the stall warning horn comes on so suddenly there is almost nothing to actually evaluate on the part of the examiner, and I am left having very little idea if the applicant can actually handle a real stall in a more aggravated situation e.g. buffet.	
Aurora, OR	1. Matrix/Font matter should be moved to the front. 2. Short Field Approach and Landing no longer mentions landing over an obstacle, (50' obstacle) assumes all short fields are clear of obstacles. This is not reality. 3. ?	We've come a long way since the days of "Flight Test Guides." 1. Clear breakdown of Knowledge, Skill and Risk Management elements. 2. Tasks are enumerated.

		3. Knowledge test elements verbiage is better not as vague as PTS.
Mariposa, CA	1. ACS Matrix / ambiguity / confusion 2. Minimal controllable speed 3. Ambiguity / confusion with knowledge questions	1. Scenario Based Training 2. Integration / knowledge and protocol 3. Less restrictions on navigation 4. Holistic approach
Reno, NV	1. Coding not in sync 2. Slow Flight Training is confusing 3. More briefing is needed to discuss potential threats prior to maneuvers.	1. pilotage and Ded Reckoning 2. Risk Management 3. Reasons for learning - scenario based training.
Houston, TX	1. Needs to have the Knowledge test codes fixed, so it is easier to know what material was missed. 2. Use more specific Terms 3. Needs to be Briefer	1. Helps elevate to the Correlative level 2. It is more specific with the Knowledge Elements 3 .It forces more Scenario based Instruction.
Brookings, SD	1. Aeronautical Decision Making (ADM) is not adequately tested. 2. More focus on risk assessment. 3. Ground reference maneuvers should be broken up like the stalls are.	1. Liked the improved clarification with more detailed information. 2. Great Format and well laid out. 3. Good References.
Vancouver, WA	1. Examiners need to embrace the ACS and its changes. 2. Special emphasis areas should be added back into the publications where they are obvious again. 3. Make the publication knee board size again.	1. Knowledge portion really helps with correlation. 2. Scenario based concept mimics how lessons are conducted and allows the tasks to seem practical. 3. Easy to navigate the publication.

Mooresville, NC	1. The Private Pilot ACS, when printed is 138 pages. It would be helpful to split out the Private Pilot Airplane Single-engine Land from the Multi-engine, Seaplane, etc. since most of the check rides are PP ASEL. 2. Most of the group did not like the change to the Slow Flight procedures. Many instructors feel they need to teach slow flight at minimum controllable airspeed and then when time to take the check ride, instruct students to fly faster than minimum controller (stall warning not beeping) for the check ride. 3. Way too much information. Try to reduce to the important/ likely risks rather than the plethora of info currently included.	1. Less subjective than PTS. More concise on what an applicant is being evaluated on. 2. Identifies risks
Bedford, MA	1. Slow Flight - Unrealistic in lower performance aircraft such as Cubs, CE-150s & CE-172. 2. The Size - Overwhelming	1.Skill, Knowledge & Risk breakdown - Especially Like Risk Management 2.Very little change in the Maneuvers, but more clarity & Layout
Springfield, VT (Glider CFI's only – Comments reference currently available PTS)	1. "No Spoiler/Slips to a Landing" are not safe in gliders in the testing environment in higher performance (Grob/K21) and smaller fields that are typical of Glider Ports. Suggest change to an altitude of 50 feet or similar. 2. Specificity of Knowledge and risk assessment is very weak. It is very Broad in what may be acceptable or not - I.e. Like style of ACS 3. Need to add Inadvertent IMC Encounters under Abnormal Emergency Procedures - I.e. What to do if "sucked up" in cloud thermaling or inadvertently backed into cloud in wave -	1. Well Organized in checklist fashion

	Good Item to add with it is Benign Spiral. 4. More Emphasis on Emergency/Abnormal tow situations of tow plane loss of power on takeoff.	
Eugene, OR	1. Layout can be overwhelming/confusing	1. Knowledge now incorporated into each task 2. Special Emphasis Areas now in each task 3. Broken down well
Fort Meade, MD	1. Basic skills scenarios structure too complex 2. More difficult to use. Format intimidating. 3. Front end loads too much knowledge before skill. where's the building block of basics before elaboration.	1. References with each task 2. Common codes for written/flight tasks 3. integration of risk management.
	Best Instructional Practices for LOC Accident Reduction	**Best Instructional Practices for operation in the NAS**
Phoenix, AZ 1st Session	1. Teaching braking action foot placement on rudder pedals 2. Don't combine maneuvers in training and testing. (e.g. combining forward slip with no-flap landing - difficult in some training aircraft; combining soft-field landing with soft-field takeoff) 3. Spend lots of time at beginning of ab-initio training on fundamental control applications (e.g. pitch, climbs, descents, banks, power, etc.)	1. Have a way to provide feedback to ATC controllers who are unprofessional. 2. Strong briefing on airspace prior to flight. Where is Class D/B? Avoid complacency. 3. Review uncommon ATC instructions. 4. Avoid cheat sheets with headings - instead reference ground track. 5. Before solo, students must be comfortable with asking questions of ATC

	4. Do upset prevention/recovery training. Put them in loss of control situation to recover from (in an appropriate aircraft with proficient CFI). 5. Exposure to tailwheel aircraft for ground maneuvering.	
Phoenix, AZ 2nd Session	1. Focus on maneuvers that cause loss of control during recurrent training. 2. Use simulator training 3. Upset prevention/recovery training for students and CFIs 4. Aircraft performance knowledge: know what your aircraft is capable of 5. Construct scenarios that lead to Loss of Control; practice at high altitude; discuss on ground afterward	1. Constantly emphasize situation awareness. 2. Greater emphasis on airspace entry requirements and proper phraseology 3. Scenario-based training 4. Teach how to use avionics and Electronic Flight Bag; encourage the use of flight following; use Google Earth to plan before flight. 5. Emphasize the importance of a sterile flight deck
Scottsdale, AZ	1. Help instructors find the line between letting students learn & letting it go too far. 2. Instructors should receive Loss of Control prevention training 3. Positive exchange of flight controls - brief before every flight! 4. Establish stabilized approach criteria 5. Conduct stage checks, even in part 61; have someone else check your student out along the way	1. Communicate with ATC; ask for help; ask for progressive taxi 2. Alternate between using pilotage and electronic flight bag 3. Brief the entire flight path beforehand 4. As an instructor, lead by example: retrieve NOTAMS, etc. 5. Use all available resources: have airport diagram; attend pilot/controller forums; take tours of ATC facility

Albuquerque, NM	1. Reinforce the need for maintaining proficiency (practice & training), not just currency; 2. Teach the students to fly the airplane from start-up to shut-down (at all times); 3. Minimize distractions during training and teach the student to minimize distractions as PIC; 4. Emphasize the importance of knowing the pilot's and the aircraft's level of performance and their limitations; 5. Teach alternates to trying to salvage a bad landing - teach deciding to and going around.	1. Teach the student to know and understand the requirements of the airspace and weather conditions in which they are flying; 2. Reinforce the need for a good (at least Standard) pre-flight briefing to include TFRs and NOTAMs; 3. Teach that the airport taxi diagrams should be used at the beginning and end of each flight; 4. Impress upon the student that real communication is important - to ask for clarification if he/she doesn't understand; 5. Teach the pilots to be vigilant throughout the entire flight.
Santa Teresa, NM	1. By establishing good procedure discipline (develop a procedure and always use it); 2. By training a consistent profile for each maneuver; 3. By teaching basic flying (stick & rudder - pitch, power & attitude); 4. By teaching the students to accurately and honestly self-critique; 5. By teaching the students to recognize that the standard has been exceeded and that it is time to abandon a maneuver (or task), return to controlled flight and then plan, setup and retry the maneuver.	1. Instruct the student on the class of airspace she is flying in while she is in it; 2. introduce the student to communication with ATC while flying en route as well as with Approach Control and Tower Control; 3. No additional responses.
Holloman AFB, NM	1. Additional emphasis on cross-wind take offs and landings;	1. Take students through all the resources available to them on ATC operation;

	2. minimize distractions during training; 3. Special emphasis on maintaining the orientation of the aircraft's flight path to the runway; No additional responses.	2. Develop an "Operation Rain Check" type program to show students how and where Air Traffic Control personnel work; 3. No additional responses.
Fargo, ND	1.Coordination and basic aircraft control top of the list. Slip vs. Skid, emphasis on technique, crab and transitional effects, directional control, rudder usage, trim usage, basic airmanship. 2.Teach full stop on all landings with back taxi. Should make it mandatory that a student load the aircraft to maximum gross weight once before practical. To many pilots operate aircraft at half weight during training then find out after they have a certificate what it's like to fly at gross. 3.Spin awareness and training needs to come back Timing on checklist usage vs. pilot workload 4.Get out of the "I need to solo by X hours" mentality Don't rush, practice more before the solo Plan of action must be discussed with the student prior to any task so knows what the outcome should be and would the CFIs expectations are 5.Don't always practice on the nice days, push your student to edge of their envelope every day. Remember your envelope is much (or should be) much bigger. Stronger x-wind training keeping in mind that the limitation is him or her and not the airplane.	1.It is not always about the pilot but about what the other guy may do. Landing lights "On" day or night while near an airport. Turn runway lights on while taxiing out for takeoff this may alert other pilots that there is someone else out there. 2.Before brake release, discuss the route to the active runway following along on the chart. Same for landing, discuss the crew action will be once you are on the ground. 3.Crew resource management needs to be taught from the first day of a student's training. Since there are two pilots or at least one learning and one that should know better in the cockpit, listen and work as a team. Use the resources in the plane to help reduce the work load. Know the systems. 4."If it's a solid line, ask, and you should be fine!" Basically teach the students and airman that any solid line requires your attention and permission from somebody to cross, period. 5.Lots and lots of caffeine… Keep fatigue at bay, learn what your level of required rest is and when the lack of rest affects you most. Teach the signs and symptoms of fatigue. If necessary, there are

		enough doctors flying out there that could maybe help you understand it better so you can teach it better.
Pittstown, NJ	1. giving spin training 2. demonstrate and practice falling leaf maneuver with students 3. more stall instruction including ground instruction on aerodynamics 4. teaching situational awareness during stalls 5. more scenarios where an unexpected stall may occur	1. discuss consequences of a pilot deviation 2. promote sterile cockpit rule during taxi and critical phases of flight 3. discuss and watch videos of runway incursion accidents 4. recognizing hazardous attitudes and discuss antidote 5. quality ground training and testing on airspace
Palo Alto, CA	1. Require Spin Training 2. Manage Distractions 3. Speed Control/Stick & Rudder	1. Runway Incursions discuss with students 2. ATC communications and interactions with pilots 3. Need to share data on common deviations
Searcy, AR	1. Stick and Rudder skills - through knowledge and skill training 2. Really know the aircraft 3. Speeds/attitudes - proper configuration 4. Go-Arounds 5. Auto-pilot off	1. Clear Communication - real experience - especially for the pilot that learns to fly at a Class G or E airport 2. Scenario based training 3. Automation Training 4. Situational Awareness 5. Cross check - hold them to it (let the student make the mistake, as far as safely and legally possible)
Teterboro, NJ	1.In depth checkouts 2. System knowledge tests	1.Chart reading emphasis 2.Navigation skills refresh

	3. Low Airspeed control emphasis 4.Proper placement of hands and feet on controls 5. Bounced landing and go around emphasis	3. Handling distractions
Sanford, NC	1. Emphasize immediate response to engine failure on initial climb. 2. Be a good role model. 3. Emphasize consistency in coordination. 4. Use more scenario-based thought problems; do not limit problems to local area. 5. Teach task priority through task saturation.	1. Time spent on ATC procedures should include actual ATC interactions. 2. Use sample written ATC communication scripts. 3. Have an ATC Town Hall meeting (controllers as invited speakers). 4. Teach the National Airspace System by teaching how the pilot fits into the system and how deviations impact others in the system. 5. Teach NOTAM and TFR awareness (and hope that NOTAM descriptions are improved to become plain English and search tools are improved to exclude irrelevant results).
Santa Rosa, CA	1.Teach students an understanding of aerodynamics at the correlation level (why the airplane does what it does, and how to make it do what you need it to do) 2. Ensure students are proficient before solo – Items listed in FARs (61.87) should be demonstrated to a level of proficiency. 3. Build confidence and proficiency in slow flight maneuvers at high and low power settings when attention is not on the instruments (e.g. help student gain a good “feel” for the airplane during low speed	1. Teach your students: when in doubt, ASK! 2. Use airport diagrams (paper & current!) 3. Write down clearances (on the ground, in the air) 4. More awareness of local ATC practices (suggestion that this is an area for improvement, especially dissemination of this information for transient pilots)

	maneuvering). 4. Teach integrated flight: use of both visual and instrument references 5. Emphasize situational / positional awareness without an over-reliance on all the electronics.	5. Do one thing at a time when moving (e.g. don't let student load a flight plan, set up the GPS, etc. WHILE THEY ARE TAXIING)
Fletcher, NC	1. minimum controlled airspeed practice 2. stall spin avoidance 3. no overbanking on final 4. airspeed control	1. emphasize airspace and restrictions 2. include flight following whenever possible 3. emphasize contacting controlling agency re airspace restrictions 4. encourage progressive taxi 5. elimination of extra activities when taxiing
Norfolk, VA	1. Review local accidents - discuss what happened. 2. Slow flight training/ MCA 3. Teach students to fly climbs and descents under the hood maintaining a constant airspeed. 4. Recovery from stalls without power. 5. Full flap go-arounds at altitude.	1. Call Flight Service to check Notams. 2. Review chart before takeoff. 3. Practice lost procedures. 4. Always get a in person brief from FSS. 5. Plan around special use airspace.
Philadelphia, PA	1. Briefing guides 2. Plan for engine loss of reduced power 3. Scan in and out of aircraft	1. Get briefing right before you take off 2. Use ATC for flight following and for current info 3. Understand the briefing you get

	4. Realistic training for stall/spin training. 5. realize what the wind is doing to the plane during approach and landing	4. New tech is not a substitute for situational awareness 5. keep information updated. Out of date info does not help.
Cedar City, UT Southern Utah University	1. Teach practical knowledge, real life scenarios on every flight. 2. Change up the weight and balance with each flight. 3. Better understanding of low altitude and low airspeed flight. 4. Turning out of box canyons, teach errors. 5. High bank angles in pattern need to be avoided in training.	1. Have the airport diagram out for every flight, review with student on the ground. 2. Use standard phraseology. 3. Have more ATC and Pilot dialogue meetings. 4. Pilot should be taught early to admit when they are unsure of instructions. 5. Teach how to properly use moving maps, use automation early in training.
Salt Lake City, UT	1. Airspeed Management 2. Scenarios (engine failures in different situations, train students to keep airspeed a priority. Simulators can train this well). 3. Lacking understanding of density altitude and its effect on flight safety. 4. Teaching safety margin during training. 5. Taking simulated emergencies down to the selected best field for landing to help applicant develop off field landings.	1. Train at Bravo Airspace. 2. Scenarios- Cross countries in every direction out of SLC Bravo forces student to learn transition. 3. Thorough briefings of ATC instructions while in the airplane (both on ground and in air). 4. Stay ahead of the airplane. 5. Teach ATC procedures and that ATC will help pilots that are unfamiliar.
Logan, UT	1. Proper slow flight. 2. Deep stalls and falling leaf demonstration.	1. Intercept procedures 2. Unfamiliar airport and airspace training when going cross country and unfamiliar

	3. Coordination 4. Pitch/power relationship 5. More spin awareness and training with actual spin training entry and recovery.	aircraft training avionics. 3. More opportunity to work with ATC during training. 4. Record clearances with short hand. 5. More data comm.
Provo, UT	1. Critical thinking/situational awareness development. 2. Teaching slow flight and stalls with emphasis on all the indications, feel, sound, controllability that lead up to LOC. 3. Teaching basic instrument flying early on in basic private pilot. 4. Teaching upset recognition and recovery early in flight training. 5. Utilize skill development exercises to build skill and judgment, such as performing slow flight just above the runway instead of always trying to meet ACS parameters for landings (and other tasks).	1. Using all available resources, legacy and modern, to identify airport layouts, airspace, and aircraft position. 2. Practice, Practice, Practice when it comes to radios.....take students in and through busy class B early. 3. Write down and repeat every clearance. 4. Teach student to ask ATC for clarification if confused or repeat instructions if missed hearing them. 5. Practice stating and discussing the flight situation at various points during a flight, including the PAVE model.
Fairbanks, AK	1. Here in AK we have the famous "Moose Stall" where pilots circle a big moose and lose the attentive nature of flying. Instructors let the student enter stalls and then corrects the behavior for future reference. 2. Never let the student get you outside of your comfort level. 3. More fundamental work with the rudder, the students are using more aileron than rudder	1. Recently changed the preflight taxi brief to include surface hot spots. 2. As soon as you get to the practice area acknowledge the special use airspace. 3. The use of moving map GPS's to know where you are at all time. 4. Demonstrating to the students how to conduct a preflight briefing (Notams, TFR's,

	becoming uncoordinated and the stall is harder to get out of. 4. Perform more demonstration stalls by the instructors. 5. At the biannual, set the aircraft up to put the students in an unusual attitude and outside of their comfort zone more often.	weather, etc...), charts, and research about the flight that is about to take place. 5. Reinforce to the student that their situational awareness and courtesy for other aircraft are a must.
South Bend, IN	1. Encourage back to basics - stick and rudder skills 2. Train and teach full stalls and recovery. 3. Train and teach incipient spin entry and recovery. 4. Encourage proficiency - WINGS program, etc. 5. Comprehensive slow flight and stall training during Flight Reviews	1. Situational awareness - airspace, airspeed, altitudes 2. Progressive taxi 3. Dealing with distractions - tablets, glass cockpits, portable GPS, etc. 4. Encourage and teach sterile cockpit operations 5. Proficiency in aircraft and avionics suites.
Spokane, WA	1. Provide basic airman skills related to stick and rudder, from students to ATC & flight reviews. (seat of the pants - less technology/flight instruments) 2. Place special emphasis to flight an low level, traffic patterns. 3. Airspeed control - Stabilized approach SOP's 4. Stall recognition all phases of flight. 5. Establishment of personal minimums. (stick to them)	1. Proper preflight planning 2. Emphasis airspace knowledge 3. Basic airmanship and proper use of technology 4. SRM/CRM 5. Maintain PIC authority in relationship to ATC.

Ann Arbor, MI	1. Teach correct control input for applicable axis. 2. Teach to look more at outside references. 3. Teach the proper pitch, and power management. 4. Teach arrival checklist timing to help stabilize approaches and landings. 5. Teach engine failure and spot landings.	1. Teach enhanced situational awareness procedures. 2. Teach how to use airport charts with emphasis on taxiways and runways 3. Teach better cross country planning. 4. Emphasize and practice the use of ATC flight following. 5. Improve the quality of the Flight Review.
San Diego, CA	1. Flying by the numbers 2. SOP per School or Company Manual 3. Coaching Development of best Situational Awareness techniques 4. Teach Stabilized Approaches concepts 5. Better focus on Stall/Spin awareness (Beware the Downwind to base and the base to final gotchas)	1. Don't rely on Electronic Charts 2. Emphasis on Pre-flight Brief between Airman and CFI 3. Airport Diagram for all Taxi. 4. All CFI's stay alert for radio calls during flight training 5. Write down the taxi clearance
Cheyenne, WY	1. Training must be more rigorous than the evaluation standards at the edge of the envelope 2. Simulator based training. 3. Spin training. 4. Teach competency in recovery of full stalls and falling leaf stalls and recovery. 5. Stress personal minimums.	1. Frequent review of airfield markings during instruction (print more 3X5 cards). 2. Training and experience in clearance understanding and read back. 3. Teach altitude compliance (+100/+50). 4. Law of primacy... be sure it is taught correctly in the first place. 5. Know your airspace.

Grand Forks, ND	1.Simulators/FTD/AATD are all helpful, as well as airplane crash videos which pertain to the topic. After that you need to show them in the air and/or on the ground what LODC looks like with the instructor demonstrating what leads to it. Many times students are so focused on flying and maybe only a few things that they lose sight of the bigger picture. 2.Let the student focus on the landing and have good defensive positioning. Let the plane land and slow before starting to talk to the student. 3.Make sure they don't feel under pressure from course managers at UND specifically to meet a deadline in training. Some students progress slower than others. 4.Defensive positioning. Remind students of errors conducive to loss of control accidents before a maneuver, so they know what to avoid. Regular demonstrations: sometimes students perform well without putting much thought into their control inputs, demonstrations help "recalibrate" their sight picture, and thoughtful explanations help reduce extraneous control inputs. 5.Teaching crosswind control by explaining and demonstrating what each control does one at a time in a crosswind: aileron, rudder, elevator, and throttle. After this is done, you need to hold your students to these techniques even in mild crosswinds. Too many instructors allow their students to not have crosswind correction with a 5 knot crosswind component because the aircraft will more than likely stay in control with this small of a	1.Practice as often as you can, chair fly at home on an off day etc. 2.Let the student make all the plans, review carefully and let the student come close to making the error but not actually breaking Regulations so that they understand the weight of what happened. 3.Help them understand what is needed before we go flying. If certain things are expected in certain airspaces, help them understand what is expected and when that applies to us. 4.Knowledge: place emphasis on equipment requirements & procedures within controlled/special use airspace. Build confidence in their radio communication skills so they are open to establishing optional communications (flight following helps reduce unauthorized entry into airspace). Practice: assign flight planning problems where the student needs to navigate complex overlapping controlled & special use airspace. 5.Students are taught what to do and say, but not taught how to mentally prepare yourself for safe flight. Less experienced students allow stress and high workloads to interfere with their focus. Common things I see in all students are the increase in volume of their voice during busy radio hours, so they are literally yelling out checklist procedures and missing clearances. Corrective action: Have the instructor physically lower their voice softly to emphasize how relaxed and calm we can be, even during a high workload. The

	component. The problem is, when a stronger crosswind happens in real life, the student is not in the habit of applying the needed corrections.	instructor than teaches the student calming techniques, like breathing and relaxing tense muscles. Telling a student to "stay ahead of the airplane," means nothing to a student. You need to teach the actual relaxation/calming technique.
Aurora, OR	1. Wait until at least 400' before reaching for and retracting flaps. Many CFI's incorrectly teach flap retraction immediately after takeoff. 2. Early flap retraction on go-arounds. After reducing drag with initial flap retraction, wait until at least 400' before final flap retraction. 3. Introduce realistic distractions earlier on in flight training, and more frequently. 4. Better rudder usage: Introduce rudder coordination exercises and rudder coordination training early. 5. Better, more detailed or lengthy pre & post flight briefings. Briefings need to be elevated to a higher importance during flight training. This will carry-over into better preflight planning of certificated pilots.	1. Write down all clearances, especially taxi instructions. 2. Take students to more complicated airspace. 3. Teach vital phraseology early on, such as "standby" and "unable" as more common replies to ATC instructions. 4. Explore all resources, especially external resources available to the student or to the certificated pilot. 5. Tours of ATC facilities should be mandatory, and followed up with pertinent related discussions.
Mariposa, CA	1. Expose to MCA 2. Demonstration of full stalls, power on/off 3. Teaching correct recovery 4. Coordinated flight at all times 5. Analyzing accidents stall spin awareness 6. Risk Mitigation	1. Brief airport diagrams 2. Attitude call outs 3. GPS Boundaries 4. Confirm communications ATC 5. Helicopter operations 6. Use checklist confirmation by touch

		7. Teaching correct scanning for traffic technique
Reno, NV	1. Stabilize approach / Go-around training not an embarrassment 2.Simulator Training or AFTD 3. Airspeed/attitude/heading discipline 4.Density Altitude emphasis 5. Risk Factors causing Loss of Control	1. Proper use of communications 2.More education of airspace 3. Emphasize FSS briefings for NOTAMS and TFRs 4. Runway markings/ incursion avoidance 5. Better cockpit planning and management.
Houston, TX	1. Bring back requirement for Partial Panel Unusual Attitude recovery for Instrument ACS. 2. Spin Training for the Primary Level Training 3. Teach Pitch Attitude Vs. Power Settings 4. Emphasis on listening/Feel to the Airplane more not just sight. 5. Have upset training required at all levels and certifications.	1. Expose students to more Tower and Non-Tower fields. They are only familiar with their primary airport and need both short and wide runways and non-tower as well as tower. 2. More emphasis between AGL and MSL in both weather and chart areas. 3. More emphasis on students doing the radio communications, exposure to uncontrolled, towered, Approach/Departure, and Center Airspace. 4. More emphasis on use standardized terminology on the Radio Vs. Slang or fast. 5. Taking the students into different Airspace more during training. Identifying the different airspace on charts and ground reference as well as technology.
Location	**Accident precursor ranking**	**Instructional Best Practices to Improve Airplane Handling**

Phoenix, AZ – 1st Session	1. Pilot health and state of mind. 2. Pilot personality. 3. Hazard identification and risk management. 4. Airplane handling skills 5. Weather knowledge and experience	1. Teach Dutch rolls 2. More time on fundamentals of flight as a building block 3. UPRT training
Phoenix, AZ – 2nd Session	1. Pilot health and state of mind 2. Pilot personality 3. Hazard identification and risk management 4. Airplane handling skills 5. Weather knowledge and experience	1. Teach/practice simple aerobatics 2. Emphasize the basic fundamentals of flight; use visual references 3. Emphasize the importance of recent experience
Scottsdale, AZ	1. Pilot Personality 2. Hazard identification & risk mitigation 3. (Optional) General flight experience & transition to Technically Advanced Aircraft 4. Pilot health & state of mind 5. Airplane handling skill 6. Weather knowledge & experience	1. Encourage students to look outside 2. "Ball" awareness & coordination 3. Control/performance practice - practice the "feel" of the aircraft without looking at the instruments
Albuquerque, NM	1. Not reported.	1. Emphasize the coordination of flight controls; 2. Teach practicing for proficiency not just for currency or to pass a test;

		3. Ensure that the student is always aware of the aircraft's configuration - are the trims, flaps and gear set to where he/she wants them to be.
Santa Teresa, NM	1. Poor hazard identification; 2. Poor quality aeronautical decision making; 3. Poor risk management/mitigation skills; 4. Failure to follow established procedures.	1. Ensure that the student has a solid understanding of control manipulation and the expected responses from those manipulations; 2. Re-enforce the requirement for the student to use references outside the aircraft and not play video games on the instrument panel (or tablet); 3. Demonstrate the edges of the aircraft's flight envelope and explain the consequences of exceeding the aircraft's capabilities.
Holloman AFB, NM	1. No responses provided.	1. More emphasis on stall recovery, particularly during the approach to landing phase; 2. Work on basis aircraft handling skills - stick & rudder; 3. More emphasis on the order in which multiple-step tasks should be performed (Throttle-pitch-flaps); 4. No additional responses.
Fargo, ND	1.Poor stick and rudder skills. 2.Lack of understanding how the relation of flaps, drag, and lift as they are related to airspeed. 3.Poor cross wind skills. Lack of knowledge as to what the "demonstrated crosswind component" really is.	1.Make Tailwheel Endorsement mandatory. Rudder skills are a must. 2.More emphasis on stick and rudder skills. Spin training should be a must 3.Teach the Falling Leaf to improve skills. More time in the cockpit without instruments. Make them look outside.

	4.Distraction. Spend to much time inside. Pilots do not fully understand the effects of uncoordinated flight.	
Pittstown, NJ	1. Pilot Personality 2. Hazard Identification and Risk Mitigation 3. Airplane Handling 4. Weather Knowledge and Experience 5. Pilot Health and State of Mind 6. Age of Pilot	1. teaching limitations of aircraft from POH 2. cover instruments and make student fly by other references 3. demonstrating envelope of aircraft such as no flap landing
Palo Alto, CA	1. Hazard Identification 2. Pilot Personality 3. Aircraft Control 4. Weather	1. Stick & Rudder knowledge and skill 2. Stall recovery in turns 3. Aircraft checklists
Searcy, AR	1. Airplane handling 2. Unable to complete the list due to time constraints	1. Teaching Minimum Control Airspeed (not as it is defined per the ACS for the evaluation, but really putting the aircraft at the minimum controllable speed. 2. Teaching about each axis with hands off and trim and how the aircraft responds when power is added and reduced. 3. Teaching crosswind takeoff & landings
Teterboro, NJ	1.Pilot Health/SOM 2.Hazard and Risk instruction 3.Pilot Personality	1. Aerodynamic instruction 2. Practice control usage 3. No response

	4. WX 5.Airplane handling skills 6. Environment awareness	
Sanford, NC	1. Evaluation by multiple instructors 2. Maintain proficiency, not just currency, through more frequent phase checks or recurrent training. 3. Use techniques personalized to the student: identify hazards by phase of flight, use scenarios for each identified hazard, recognize when an early decision is beginning a chain of actions that needs to change. 4. Identify hazards by phase of flight and chain of events. 5. Use a scenario for each identified hazard.	1. More frequent phase check 2. Maintain proficiency 3. Personalize technique
Santa Rosa, CA	1. Airplane Handling Skill 2. Wx Knowledge and Experience 3. Hazard Identification and Risk Management 4. Health and State of Mind 5. Pilot Personality	1. Use tail dragger on initial pre-solo training 2. Crosswind landing training – train at altitude with slips on a point / Dutch rolls 3. Teach an efficient cross check (both external and flight instruments)
Fletcher, NC	1. pilot personality 2.weather knowledge 3. pilot health	1. slow flight 2. stall training 3. encourage regular practice

	4. airplane handling 5. hazard ID	
Norfolk, VA	1. Stick and rudder skills. 2. State of Mind 3. Weather knowledge 4. Risk mitigation 5. Pilot personality 6. Airplane maintenance	1. Slow flight 2. Stable approaches to landing 3. Using trim and understanding aerodynamics.
Philadelphia, PA	1. Airplane handling 2.Hazard id and risk 3.weather knowledge 4. Pilot personality 5.Pilot health and state of mind 6. Fuel management along with a good preflight	1.teach slow flight properly 2. Proper coordination of the flight controls for existing conditions 3. energy management in the traffic pattern
Cedar City, UT Southern Utah University	1. Pilot Personality. 2. Pilot Health and State of Mind. 3. Hazard Identification and Risk Management. 4. Airplane Handing Skills. 5. Weather Knowledge and Experience.	1. Basic Stick and Rudder skills taught early, not rushed. 2. Avoid forcing aircraft down to land, teach to do a go around if in doubt. 3. If something doesn't look right identify or turn back.

Salt Lake City, UT	1. Hazard Identification and Risk Management 2. Airplane Handing Skills 3. Pilot Health and State of Mind 4. Pilot Personality 5. Weather Knowledge and Experience	1. Provide different situations to avoid complacency. 2. Teach basic visual skills. 3. Correlating maneuvers to actual situations.
Logan, UT	1. Hazard Identification and Risk Management. 2. Weather Knowledge and Experience. 3. Airplane Handing Skills. 4. Pilot Personality. 5. Pilot Health and State of Mind.	1. Slow flight 2. Stalls 3. Coordination and pitch/power
Provo, UT	1. Hazard Identification and Risk Management. 2. Pilot Health and State of Mind. 3. Pilot Personality. 4. Weather Knowledge and Experience. 5. Airplane Handing Skills.	1. Dutch rolls, slow flight. 2. Slow flight and stall practice. 3. Every approach is just a preparation for a go-around mentality.
Fairbanks, AK	1. Hazard Identification and Risk Mitigation 2. Pilot Personality 3. "OTHER" Aeronautical Decision Making	All depends on the phase of flight being discussed. 1. Pro-activeness to do their bi-annual prior to August 23, hunting season and the last day of time period. 2. If we are talking about Landing then Crosswind. 3. If we are talking about part 135 operators then short field landings.

South Bend, IN	1. Airplane Handling Skill best practices. 2. Pilot personality best practices. 3. Pilot health & State of mind best practices. 4. Weather knowledge & experience best practices. 5. Hazard Identification & Risk Mitigation best practices.	1. Coordinated flight exercises 2. Slow flight, stalls and go-arounds 3. Reduce automation dependency and bias - raw data, no autopilot exercises
Spokane, WA	1. Airplane handling skills (Stick & Rudder) 2. Hazard Identification and Risk Management 3. Weather Knowledge and Experience 4. Pilot Personality 5. Pilot Health and State of Mind	1. Knowledge of the pitch/power relationship with practical demonstration and practice. 2. Knowledge of coordinated and uncoordinated flight (all phases) with practical demonstration and practice. 3. Knowledge of stall recognition/recovery, aircraft stability/design with practical demonstration and practice.
Ann Arbor, MI	1. Airplane Handling 2. Hazard Identification and Risk Mitigation 3. Pilot Health and state of mind 4. Pilot Personality 5. Weather 6. Other - maintenance quality	1. Adequate crosswind training 2. Proper aircraft control usage 3. Proper speed control
San Diego, CA	1. Weather Knowledge and Experience 2. Hazard Identification & Risk Mitigation	1. Practice, Practice, Practice 2. Aerobatic course 3. EMT exposure

	3. Pilot Health & State of Mind 4. Airplane Handling (Stick and Rudder Skills) 5. Pilot Personality	4. Emphasis on Angle of Attack & Proper use of power to control altitude 5. Use a CFI often and take advantage of the Wings program 6. CFI Demonstrate, Student Perform, Student Critique & CFI Evaluate
Cheyenne, WY	No response	1. Knowledge of basic aerodynamics. 2. Slow flight. 3. Spin training.
Grand Forks, ND	1.Rudder/braking control on landing. Sometimes, my students get too aggressive on rudder/ brakes and we start swerving left and right and I have to take controls to cancel the oscillation. 2.Very specific: But in a power off 180 maneuver, there are many times where the airplane will actually descend AFTER you initiate the correct control inputs for a go around. This is more likely to occur if the airspeed is lower than it should be and flaps are extended. Students do not understand the importance of an immediate abort of the maneuver if they are too low. If you know you are not going to make the point, "stretching the glide" or continuing the approach to landing is unacceptable. I have lost 30 or more feet after initiating a go around on some power off 180s, and if you are low to begin with, the airplane risks touching the ground before there is pavement beneath it.	1.Give them challenging situations to let them handle it. Practice short approaches, cross wind landings, soft field grass strip take offs and landings, doing something different every day to keep their skills fresh. 2. Let the student land without inputs from the instructor 3. Don't rely on automation as much 4. Breaking down each control into individual parts and purposes. Only then can you teach relationships between the flight controls. Students need to be told what visual and instrument cues will tell them if they have the correct control inputs. 5.Demonstrations: show the effect of each flight control in real world situations (fly-over a runway and test crosswind correction; prove pitch & power relationship on final approach). Practice is the biggest. Teach students to be deliberate in control inputs.

		6. Breaking down each control into individual parts and purposes. Only the can you teach relationships between the flight controls. Students need to be told what visual and instrument cues will tell them if they have the correct control inputs.
Aurora, OR	1.Weather 2. Health 3. Airplane Handling 4. Personality 5. Hazard identification	1. Rudder control 2. Airplane coordination 3. Flap usage, flap retraction 4. Airplane configuration management 5. Energy management
Mariposa, CA	1. Airplane Handling 2. Hazard Identification 3. Pilot Health 4. Weather knowledge 5. Pilot personality 6. Pilot currency 7. Aircraft maintenance	1. Proper preflight briefing 2. VR & kinesthetic senses 3. Spend time maneuvering in aircraft, perfect practice
Reno, NV	1. Emphasize cross wind training 2.Increase knowledge of weather threat 3.Better pre-flight planning and preparation	1.Stable approach 2. Attitude control during descents 3. Emphasize Rudder use and coordinated flight

	4. Emphasize Risk management Decision Making 5.Practice Go-arounds	4. Use of best flap setting for landing condition 5. Know limits and operate within them
Houston, TX	Not Reported	1. Better defined Stabilized Approach Criteria for both VFR and IFR. 2. More emphasis on Coordination of controls. 3. Less use of Auto-Pilot and more manual flying skills.
Brookings, SD	1. Adverse yaw and rudder coordination. 2. Slow flight demonstrations. 3. Practice more power-off 180 degree landings from the downwind leg.	1. Allow the student to feel the controls, including rudder input during the flight instructor practical demonstrations - especially during crosswind landings. 2. Allow a more slowly transition of controls to students during demonstrations.
Vancouver, WA	1. Pilot Health and state of mind 2. Hazard ID and risk mitigation 3. Pilot personality 4. Airplane Handling 5. Weather knowledge	1. Spend time on not just learning the basics, but mastering them. Using training drills like Vertical S's and Dutch Roll. 2. Teach Spins 3. Allow students to make mistakes. It is just as important to do a uncoordinated turn as it is to do a coordinated turn in order to really understand the difference.
Mooresville, NC	1. Hazard identification and risk mitigation 2. Airplane handling - stick and rudder skills 3. Weather knowledge and experience	1. Practice slow flight and turns back and forth - without reference to any flight instruments. Require proper coordination of rudder/aileron.

	4. Pilot health - state of mind 5. Pilot personality	
Bedford, MA	1. Handling the aircraft - Basic Handling & Smoothness 2. Experience with appropriate Decision Making	1. Dutch Roll Maneuvers 2. More training/Demo of Slips at altitude in early training 3. Dynamic Flight Training - Maneuvering and also variation in aircraft types during training.
Springfield, VT - Glider Instructor Camp	1) Flight Coordination & Handling 2. Ability to adjust & deal with variations	1. Emphasis on Coordinated flight & Stabilized approaches 2. Detailed specific instances of where to be looking outside the aircraft during different flight events. 3. Variations in Scenarios - Mostly discussion in Gliders
Eugene, OR	1. Weather knowledge and experience 2. Hazard Identification and Risk Mitigation 3. Pilot personality 4. Airplane handling skills 5. Pilot health and state of mind	1. Airspeed awareness and precise control 2. Stabilized approach 3. Stall Training
Fort Meade, MD	1. airplane handling 2. pilot personality 3. weather knowledge/experience	1. basic stick and rudder 2. flight to Minimum controllable airspeed 3. airplane appropriate training. transition or initial.

	4. hazard identification 5. IMSAFE 6. proper preflight	
Location	**Instructional best practices to improve hazard identification and risk mitigation**	**Instructional best practices to address pilot health and state of mind**
Phoenix, AZ – 1st Session	1. FRAT form/FRAT app 2. Teach self-assessment: IMSAFE/ PAVE 3. As CFIs - lead by example	1. Maintain an awareness of the influence of external pressures. 2. Have a good personal and work policy in place for calling in not fit for flight, without penalty. 3. Practice what you preach. Also, more FAA resources are needed for guidance on fatigue and heat.
Phoenix, AZ – 2nd Session	1. Use scenarios, but make it interesting and engaging 2. Conduct thorough preflight planning; identify hazards and assess their risk along the entire flight. 3. Lead by example. Your students will copy you as they see you identify hazards in each flight.	1. Lead by example: don't fly sick or fatigued, etc. 2. Conduct an honest debrief; purposely overload your student once in a while and point out their performance decline 3. Have your student conduct a self-assessment
Scottsdale, AZ	1. Read case studies 2. Pre-planning risk management (FRAT tool) 3. CFIs should undergo ongoing evaluations	1. Teach operational pressure awareness (PAVE, IMSAFE) 2. Use risk assessment tool prior to flight (& during flight) 3. Teach how to recognize human limitations

Albuquerque, NM	1. Read case studies 2. Pre-planning risk management (FRAT tool) 3. CFIs should undergo ongoing evaluations	1. Teach operational pressure awareness (PAVE, IMSAFE) 2. Use risk assessment tool prior to flight (& during flight) 3. Teach how to recognize human limitations
Santa Teresa, NM	1. Conduct a brief hazard evaluation and risk mitigation of the student, the instructor, the aircraft and the weather with the student before each flight lesson; 2. If normal evaluations do not provide hazards to mitigate, offer examples to demonstrate the actions that could be taken to mitigate those hazards; 3. No additional responses.	1. Review the student's and the instructor's physical and mental condition to fly the planned flight (see hazard identification and risk mitigation, above); No additional responses.
Holloman AFB, NM	No response	1. Emphasize hydration, especially during the summer month; 2. Emphasize the need to postpone or cancel a training flight when the student is suffering from fatigue; 3. No additional responses provided.
Fargo, ND	No response	1.We can help each other as a crew but not certain how to do this other than making certain we realize when our heads are in a mess (divorce, kids, work, etc.)
Pittstown, NJ	1. stress and require checklist usage	1. teaching and promoting IMSAFE checklist

	2. discussion of past accidents and hazards involved 3. create scenarios in flight to get pilot thinking about possible hazards	2. instructors should be alert for state of student when they arrive for lesson 3. stress importance of self-certification for pilots that don't require a medical
Palo Alto, CA	1. Have a "Plan B" 2. Know Limitations 3. FRAT/Personal Minimums	1. Take a Break "Time Out" 2. Supportive Environment 3. Communicate
Searcy, AR	1. Scenario Based training 2. Before flight and after flight briefing 3. Go & No go decision - let the student make it, and correct if necessary	1. Always asking the student how is/was your day, then they develop that as the continue as a pilot 2. Set the GOOD example 3. Develop Personal minimums
Teterboro, NJ	1. Importance of pre/post flight brief 2.in depth WX knowledge	No response
Sanford, NC	1. Discuss phases of flight to identify hazards. 2. Use scenarios and diversions 3. Teach review of decisions to aid recognition of when early decisions begin a chain of events with undesirable risks	1. Use IMSAFE and PAVE checklists. 2. Continually evaluate student state of mind. 3. Make student self-aware of state of mind. Teach review of decisions.
Santa Rosa, CA	1. Pre-flight and Post-flight briefing RE what are (were) the risks, and what are mitigation plans? For each flight. 2. Teach students to analyze risks of a “direct” routing, so they learn that is not always the safest choice.	1. Use IMSAFE and the Personal Minimums check list from the very first lesson! 2. Discuss stress and fatigue with students. Make sure they feel “ok” to say it is not a good day for them to fly.

	3. Introduce students to less than ideal conditions – high winds, low visibility, rain, etc. Discuss the risks posed by these conditions, but be careful not to leave them overconfident.	3. Strive for optimal TASK related stress – too little and they may relax and miss something, too much and they may be overloaded (and miss something). Help students recognize the optimal task related stress range.
Fletcher, NC	1. fuel cap and visual quantity check prior to takeoff 2. proper preflight 3. encourage solicitation of ATC assistance for emergency situations	1. no drinking and flying 2. be aware of the effects of pressure changes on clogged sinuses 3. be aware of prescription drug restrictions and effects
Norfolk, VA	1. POH review 2. Accident reviews 3. Systems knowledge	1. Agitated or stressed is a big distraction 2. Weird diets or dehydration 3. Over the counter prescription drugs
Philadelphia, PA	1. Plan ahead of time 2. ensure airplane is ready to fly 3. Ask yourself, is it a good idea to do something this way?	1. Plan for the flight 2. look at impacts of over the counter meds 3. No activity as important as your life. Delay a flight it you have doubts
Cedar City, UT Southern Utah University	1. Identify the greatest threat to every flight, have a plan. 2. Use the PPP model on every flight. 3. Scenario based training on every flight.	1. If there is any doubt, discontinue. Stick to personal minimums. 2. Long cross country or multi day trips to push students learning limits. 3. If sick, don't fly……set the example as an instructor.
Salt Lake City, UT	1. Incorporate previous accidents.	1. IMSAFE Checklist

	2. Teach Risk Management with scenario based training. 3. Encourage safety and establish safety culture.	2. Teach how to manage stress. 3. Teach how to avoid situations that will induce stress.
Logan, UT	1. Pre-flight planning 2. Personal minimums 3. Pre-flight risk assessment	1. Rest 2. Life stress and dealing with stress, signs of stress. 3. Hazardous attitudes and antidotes.
Provo, UT	1. Every lesson is a scenario. 2. Weather interpretation and alternate planning. 3. Pre-flight and in-flight risk assessment.	1. Teach how to use IMSAFE checklist, not just what it is. 2. Share examples and case studies of experienced pilots who neglected this. 3. If you feel like you HAVE to do this flight maybe you shouldn't.
Fairbanks, AK	1. Utilization of the WINGS program for students who are questionable at flying during flight reviews. 2. Use the FY16 ACS because it did a good job at this, making sure the student understands what is expected and what risk is associated with each flight maneuver.	1. No response
South Bend, IN	1. FRAT or formal assessment tool usage 2. Personal minimums 3. No response	1. Use of IMSAFE checklist 2. Personal accountability - health status 3. Human factors and medical training - FAASTeam programs

Spokane, WA	1. Develop risk management strategies related to preflight, inflight, and post flight analysis. Use formal documented SOP. 2. The use of PAVE, DECIDE, 3-P, models. 3. ADM - Start early in the instructional process.	1. Applying a proper honest assessment of your health. Use others 2. Proper use or non-use of medications (prescription and OTC) 3. IM SAFE checklist is a good starting point for assessing risk and applying ADM.
Ann Arbor, MI	1. Use Scenario based training 2. Use of Preflight planning tools - PAVE and FRAT 3. Expand on teachable moments	1. Use of PAVE 2. Use of IMSAFE checklist 3. Solicit Aviation Medical Examiner advise and input
San Diego, CA	1. Face to face pre and post flight briefings. 2. Student Familiarity (or lack thereof) with risk assessment matrix 3. Student Self Critique 4. Personal Risk Tolerance	1. Interview and get to know your student 2. Focus Instruction to Mitigate concerns 3. Develop a plan tailored to your individual student
Cheyenne, WY	1. Use a written risk assessment. 2. Scanning outside. 3. We do a better job of assessing than mitigating (managing) risk.	1. Embrace the "P" in PAVE when making risk assessments. 2. Emphasize effects of OTC medications. 3. Follow IMSAFE check list.
Grand Forks, ND	1.Experience and a critical thinking mind. 2.Turn off the PFD and have the student fly using outside references only. I did that with each student and known of them got into accidents etc.	1. Help them start the flight well, and slowly do less and less so they can do it on their own. Sometimes jumping in the airplane and expecting the student to perform flawlessly after a few days of not flying isn't setting them

	3. Don't rely purely on numbers, math, and "what we CAN do." Rather, go with your gut and what you feel is right. 4.Teach situational awareness as a fundamental skill, as important as communication and aircraft control. Define margin of safety, and how "being within standards" is not sufficient: a pilot should thrive for greater safety margins to the best of their ability. Teach task prioritization in a logical way: hazards and threats come first (traffic, terrain, weather), lesson/flight completion does not factor into decision making.	up for success. 2. I look for bad attitudes in general. Students will have negative days and negative emotional moments from time to time, but if there is a pattern of negative or pessimistic views in regards to flying or flight training, that is recipe for not having a successful outcome 3.Don't push it 4. Get adequate rest before a flight, don't drink before a flight 5. Set guidelines for life away from the airport. Sleep, nutrition, exercise and care for preexisting conditions are not separate from flight safety, they are integral. For state of mind: pilots should strive not to get away with as little work as possible, but rather put in as much work as possible to see how much they can get away with.
Aurora, OR	1. Checklist usage 2. Briefing pre & Post-Flight 3. Preflight action	1. Fatigue 2. Illness 3. Medication
Mariposa, CA	1. Stress seat locks 2. Brief in detail each phase of flight 3. Look outside for traffic, scanning traffic in pattern 4. Proper preflight	1. IM SAFE 2. Dehydration 3. Self-assess 4. Basic medical

Reno, NV	1. Teach PAVE strongly 2. Have single pilots state self-briefing out loud. 3. Look for alternatives to decisions 4.Use FRAT 5.Know when to say it is too risky.	1. Use FRAT 2. Insure adequate sleep 3. Proper nutrition 4. Understand startle affect and fear 5. Avoid complacency
Houston, TX	1. Weather identification both reading of and visual cues. 2. Currency Vs. Proficiency 3. Judgement skills.	No responses
Brookings, SD	1. Demonstrate more concise decision-making with reduced visibility. 2. Expose the student to poor visibility conditions. 3. Teach more use of the IMSAFE, PAVE, GUMP, etc. self-checklists. 4. Use GUMP acronym on all short finals (G-ear down, U-ndercarriage down, M-ain wheels down, P-ut the landing gear down). 4. Use more memory reminders aids (i.e. rubber bands on the yoke, throttle)	1. Teach the dangers of "get home itis". 2. Teach the 123 alternate decision process (plan A, plan B, and plan C). 3. Always have a power-off safe survivable landing site in mind.
Vancouver, WA	1. Discuss frequently what is your plan B if plan A doesn't remain a good option.	1. We really wish mental health and cognitive abilities were a part of the medical examination, especially for older pilots. We have experience many students who first

		signs of dementia and Alzheimer's were ID' d because they were unable to learn flying related tasks. This is way above the capabilities of CFIs. 2. Honesty is important for both the CFI and the student. They both must have a safe avenue to tap out if their ability to focus has been compromised.
Mooresville, NC	1. Use the risks in the ACS to teach the students the possible hazards.	1. PAVE checklist, IMSAFE
Bedford, MA	1) IMSAFE 2. Development of Personal Minimums and written down 3. Decision Making/Flight Risk tools	1. Rusty Pilots need more training 2. Regular exercise - Healthy Body & Mind
Springfield, VT	1) Discussion of Various Scenarios 2) ADM tools 3) Get students to also fly at other than home airport. Encampment	1. IMSAFE
Eugene, OR	1. Full weather & Notam/TFR briefings during preflight 2. Plot full route and review an expanded view on computer/tablet 3. Minimum Safe Altitude review of route	1. Using an "I'M SAFE" or other appropriate "personal preflight" checklist 2. Avoid stressful situations before flying
Fort Meade, MD	1. Teach thought process for evaluating hazards and mitigating such for each flight. 2. Determine personal limits.	1. Fatigue and stress 2. teach about OTC drugs 3. illness and flying.

	3. "hanger flying" problems, incidents and decisions.	
Location	**Instructional best practices to address pilot personality**	**Instructional best practices to improve pilot weather knowledge & experience**
Phoenix, AZ – 1st Session	1. Have students pre-brief and de-brief their own flight to connect to ADM practices. 2. Engage in conversations with your students outside of aviation to gauge their personality. 3. Get them to identify their own hazardous attitudes and where they made errors.	1. Get weather experience when the weather allows for it (get IMC when available and safe) 2. Plan training to utilize resources and give yourself a planned "out". 3. Familiarity with "Aviation Weather" and "Aviation Weather Services". Talk to a briefer when learning - they can put the pieces together for you.
Phoenix, AZ – 2nd Session	1. Use real-world, non-flying experiences and accident review examples 2. Teach student to be assertive with themselves and others 3. Use video training: watch accident videos; Air Safety Institute videos	1. Plan a scenario around flying somewhere else with different weather than they're used to (tabletop exercise to see new weather information and patterns) 2. Teach about all the resources that are out there to retrieve weather: what's out there and how/where to get it 3. Understand there are time delays and limitations to weather tools (example, radar is often 15 minutes+ old)
Scottsdale, AZ	1. Conduct scenario training using accident analyses 2. Be honest in assessing students 3. Have students debrief their own flight	1. Take students out into weather conditions outside their limitations (but inside the CFIs limitations) 2. Have students talk to weather briefers. Work on better knowledge of weather charts. Teach go/no-go decision every flight.

		3. Utilize AOPA studies and FAAST courses
Albuquerque, NM	1. Teach the importance of performing a self-assessment before each flight.; 2. Instruct the student in the identification of hazardous attitudes; 3. Explain the need to voluntarily comply with the regulation - they are there for a reason. They were written in blood.	1. Train the students to recognize weather systems common to his or her training area; 2. Provide video examples of weather systems that are unsafe to fly in or that do not occur in the area where the training occurs.
Santa Teresa, NM	No Response	1. Teach the student to translate weather reports into real in-flight experiences; 2. Prior to planning a flight, assist the student in developing and committing to a written document his or her personal go-no go weather limitations; 3. Use ground instruction and (YouTube) videos to present weather conditions that do not occur in the area where the instruction is being given or whether that would be hazardous to experience in-flight.
Holloman AFB, NM	No Response	No Response
Fargo, ND	1.Although the book tells us what the conditions are, there is now element of training that truly teaches what it is we can do with these hazardous attitudes. If we walk away, the 400-pound gorilla gets active. If we don't make every attempt to manage it, we have failed but how do we do it? Teach us some tricks on identifying and managing the attitude.	1.Use multiple sources, never one source, show them (find examples) 2.Think more about alternates. If you do everything right and the weather cooperates you will get there...what happens if we get there and cannot land due to weather or... 3.Weather trends up to our departure time are often ignored. Look back, right and left to see what mother nature has up her sleeves.

		4.Practical exercises for weather in the local area Let student make poor decisions in the training, work them through the expectation vs. outcome drill see if they can rethink their way through the issue, if not, give them more homework to try and spark why they made a possible bad decision. 5.Take the time to truly understand the websites you use, not just the data you want, look for the supporting data elsewhere. Dig down and teach them how to utilize their favorite website or program. Ask a question of the folks who know, teach students that it is okay to call AFSS and ask them why the weather may be an issue. Even if they think it looks okay…
Pittstown, NJ	1. recommend different instructor if a personality conflict arises 2. if a student does not seem to have the aptitude to become a pilot, give student an actual estimate of how much time may be required to attain the certificate.	1. require pilots call Flight Service before each flight 2. have students fly in actual weather or clouds 3. have students make weather decisions before giving any input
Palo Alto, CA	1. Impatient, impulsive is "time driven" 2. Remove stereotype "hazardous attitudes" 3. Recognize traits valued in todays' culture that don't transfer to flying	1. Knowledge of winds 2. Fog, Haze, Smoke recognition 3. Instrument training
Searcy, AR	1. Identify hazardous personalities to student	1. Set the example

	2. Be honest with the student 3. Assess students' attitude	2. Review aircraft accidents and review bad decisions 3. Table Top Exercise
Teterboro, NJ	No Response	
Sanford, NC	1. Use Hazardous Attitudes to assess the risks of personality factors. 2. Use different teaching techniques for different personalities and situations. 3. Recognize clash of personalities and make changes.	
Santa Rosa, CA	1. You are not going to change a pilot's basic personality, but you can change how they think about things, make decisions, and ultimately their behavior in an airplane 2. Discuss the fact that all of us have some attitudes that may need adjustment when engaging in flying 3. CFI admit when they are wrong – e.g. demonstrate by example a self-critique and how you go about improving your own flying	1.Let student always determine wx for go/no go 2. Scenario based training
Fletcher, NC	1. emphasis on personal minimums 2. objective self-evaluation	1. review and encourage airborne weather contacts 2. familiarize and encourage use off FSS website-www.afss.com
Norfolk, VA	1. Ready to learn/fly 2. Teach not to take chances 3. Never disregard rules and regulations	1. Know what will kill you 2. Always use flight service 3. Look at Metars to see weather trends around your direction of flight.

Philadelphia, PA	1. educate the pilot on error of their ways 2. refer the pilot to a higher authority- FAA 3. Peer pressure good flying habits	1. See the weather graphic before flight 2. Instructors should set good example 3. Get multiple weather reports before flight.
Cedar City, UT Southern Utah University	1. Personalities can change, be prepared. 2. Invulnerability must be acknowledged. 3. We need to understand sometimes we put students in situations they normally wouldn't…...pushing the limit too far.	1. Use scenario based training for each mission or lesson. 2. Simulate high density altitude by reducing available throttle on take-off when dens alt is not high (winter). 3. Teach to divert on every flight to reinforce that flights may not be able to be completed to destination airport.
Salt Lake City, UT	1. Know when to stop training someone (screen students, notice red flags, and know when to have conversations). 2. Set example. 3. Point out hazardous attitudes within student.	1. Set an example…....respect weather. 2. Get standard weather briefings every time and be conservative with decisions. 3. Have conversations with students about why you are canceling for weather instead of just canceling and leaving it at that.
Logan, UT	1. Associated risks 2. Professionalism and checklist usage. 3. Lead by example don't be afraid to ask for help.	1. Allow student to make go/no-go decisions as early as possible to see consequences. 2. Fly in the weather when available. 3. Simulated scenarios or simulator training.
Provo, UT	1. Hazardous attitudes, identify real life, outside of flying situations where they personally have experienced hazardous	1. Build a good go/no-go decision.

	attitudes. 2. Scenario based training – have them show up one day and give them a “no-go” scenario with external pressure to go fly, actually not go and do not fly that day. 3. Discuss the CFI’s tendencies for hazardous attitudes with the student and demonstrate proper handling.	2. Know your minimums, don’t push your personal minimums. 3. Fly in marginal weather conditions, you are never going to learn until you get some experience with some adverse weather conditions.
Fairbanks, AK	1. The ability to trade students off before personality conflicts take effect. 2. Finding ways to ask the student to do something when they shouldn't so they understand that they were challenged and understood what scenario they should have followed.	1. The utilization of the flight apps (Garmin app, Foreflight) to set their personal minimums and then if the weather ahead of them is below their set minimums then it is flagged. 2. Have the students tour the local Flight Service Station. 3. The utilization of the Alaska Weather Cam system.
South Bend, IN	1. Set and adhere to personal minimums 2. Personal accountability - peer accountability 3. No response	1. Emphasize general weather principles - thunderstorms, fog, weather systems, etc. 2. Enhance knowledge and usage of weather reports and charts. 3. Ensure a thorough understanding of the responsibilities of self-briefing.
Spokane, WA	1. Use and recognition of hazards attitudes. (Pilots, other pilots, non-pilots) 2. Development of risk management strategies and personal minimums.	1. Develop seasonal risk management strategies and personal minimums. 2. Practical application of weather reports and forecasts. Verify what you read with

	3. Know when to stop flying. Age related issues. Be honest, use others.	what you are actually experiencing. 3. Proper use and limitations of weather technology within the cockpit.
Ann Arbor, MI	1. Establish and use a Personal Minimums checklist 2. Have another CFI approach student as necessary 3. Lead by example	1. Instruct on how to get a good weather report 2. Proper use of a checklist e.g., FRAT tool 3. Fly in actual weather conditions that may be encountered
San Diego, CA	1. Self-awareness Training & Best practices 2. Know the 5 Hazards Attitudes (It would have been useful to have these contained in the presentation. None of us knew them) 3. Safety Correlation / Personal Minimums	1. Thorough Weather Brief Instruction 2. Geographic Specific Training to local conditions 3. Mountain Flying Training, Mountain Wave / Rotors 4. Sim Weather training if unable to reproduce in local flight training
Cheyenne, WY	1. Much less dependence on electronics. 2. Difficult to deal with -- no specific answer.	1. More simulator training. 2. Instructors should push the comfort envelope (e.g. crosswinds, etc.) of students so that they can slowly expand their skills. 3. Encourage extended cross-country flights to expose them to difficult weather systems and use risk assessment.
Grand Forks, ND	1.I like to give "what if" scenarios. With any hazardous attitude, ask them what they would do in a certain situation.	1.Many of my students automatically weather if something isn't right which I believe is not the best way to look at it. You need personal minimums yes, but you also need to experience some challenges too. Sometimes it

	2.Spend time learning how the student does things outside of flying 3.Pilot personalities are almost never an issue, a CFI needs to know who they are working with, but never repress a part of a student's personality to fit their instructional style. Instead, they should find what drives the student and the way they like to work, adapting their style to whatever will make the student most successful. Hazardous attitudes are fairly well documented and remedies can be found in FAA publications, but it's important to address them respectfully. When it comes to temperaments, if the instructor commands enough respect, students tend to reflect our behavior in their flying. If the instructor is being nonchalant, that will reflect in the student's behavior. If they get angry easily, the student is more likely to get frustrated earlier. Being mindful of the way we seem to our students, and keeping a demeanor appropriate for a professional pilot is the best solution to controlling temperament.	takes a CFI to show them what flying in marginal VFR looks like, or flying around rain showers. Obviously it takes good knowledge and judgment and you shouldn't emphasize telling a student that flying in this is always ok, but it's good to show them what it looks like in person. 2.Experience is the only way students learn so let them make the decision and let them suffer the consequences of their decisions as long as it does not break any regulations or degrade safety. 3. Test students orally before a flight 4. Reading PIREPs, NASA reports, and simply playing around with the ADDS website. Try to get actual IMC for lessons requiring instrument time, regardless of the course. When a flight gets weathered, be sure to debrief the no-go decision with the student, going through appropriate weather products, and using reliable resources to understand the causes of the current weather.
Aurora, OR	1. CFI's must lead by example 2. Practicing with integrity, good ethics, and a code of conduct. In the case of challenging students, knowing when to "pull the plug" 3. Pilot-to-pilot collaboration. Asking for help from fellow instructors.	1. The development of personal minimums 2. Scenarios involving "distant weather" examples, such as understanding "unfamiliar" weather, such as weather which exists at locations away from home base 3. Planning alternative courses of action for every flight
Mariposa, CA	1. Invulnerable	1. Study / understand meteorology

	2. Impulsivity 3. Macho attitude	2. Weather briefing 3. Have data / know limitations
Reno, NV	1. Learn from past accidents 2. Conduct preflight briefing 3. Conduct Post-flight briefing in detail 4. Understand outside stress inducers	1. Learn new ways of getting weather and understand data 2. Know that forecast are predictions, and can change. 3. Have personal minimums established and follow them 4. Use PIREPS 5. Avoid trying to beat weather
Houston, TX	No response	1. Limitations, Accuracy, Trends 2. Personal Minimums 3. Diversion Criteria
Brookings, SD	1. Have the student talk out loud so the instructor knows what they are thinking. 2. Demonstrate good CRM skills (ask, listen, talk). 3. Have the student teach the instructor (switch roles).	1. Provide more "hood time" to expose the student to IFR conditions. 2. Demonstrate to the student what 1-mile visibility is like versus 3 miles.
Vancouver, WA	1. All student must prove that they can remain calm in the face of challenges. 2. All students must prove that they accept the safety practices of the industry.	1. Discuss the weather in depth on days where you decided not to fly 2. Read NTSB stories. 3. On days where we cancel due to weather, we like to download live weather in the

		simulator and see what it would have been like.
Mooresville, NC	1. Go over possible scenarios of each of the hazardous attitudes.	1. Require students to get a weather briefing for each flight. 2. Give primary students at least one flight of actual IFR flight.
Bedford, MA	1. Help individuals that are very successful in life and accustomed to risk realize that risk is physical, not just monetary, image etc. 2. Flying requires a different skill set than what you have had.	1. Deciphering how to use - a lot of information available, but can be overwhelming. 2. Apply to the situation
Springfield, VT	No response	1) Correlating weather minimums to Airspace in. - Scenarios 2) Review of Cloud Distance Requirements
Eugene, OR	1. Don't be the Macho Man – Don't try to "John Wayne" it (or think you can during preflight prep) 2. Talk (or self-talk) through the "what-ifs" before flight	1. Build an awareness of local weather patterns 2. Practice reading weather charts and forecasting tools 3. Make and watch videos of real time weather showing how fast it can change (would be good for FAA to make educational briefing showing weather radar/satellite/TAF/METAR examples for sudden changes in weather)
Fort Meade, MD	1. teach self-awareness and evaluation 2. teach professionalism	1. Become a weather geek

	3. hanger fly about pilot personality based bad decisions and accidents.	2. follow weather continuously through each flight. 3. study/hanger fly weather incidents.
	Instructional best practices to address 6th accident precursor	**Final thoughts**
Phoenix, AZ – 1st Session	No response	1. More than 40 hours should be required for Private Pilot certificate. 2. Flight review should be more frequent and thorough. 3. ACS should address standards for Aviation English Language Proficiency.
Phoenix, AZ – 2nd Session	No response	No response
Scottsdale, AZ	"General Experience and transition to Technically Advanced Aircraft" 1. Have low-hour instructors train commercial students first (like a "green-on-green" rule) 2. Use simulator training to enhance experience 3. Use "dead" time on cross-countries to work on MFD (but maintain situational awareness!)	No response
Albuquerque, NM	1. Adapt teaching and training techniques to the age of the students - the foundation that older students bring is different than the foundation that younger students have.	No response
Santa Teresa, NM	No response	No response
Holloman AFB, NM	No response	No response

Fargo, ND	1.Always fly the aircraft first. Some give up way to easily here. Upset recovery should be taught at all levels so they can see how much these can take. 2.CRM must be taught at the basic level. Too many pilots have that, "I am and island", attitude when they have and could be using resources like a passenger or ask another pilot to come along. 3. Do not always use the same CFI. Mix it up a bit. Not every CFI thinks alike and they all come various experience and background levels.	1.Instructors need to understand that even now they have a license to learn as well. Their instruction should not stop because they have reached the level of CFI. More training add CFII. 2.Ride along with other instructors to gain an additional perspective. Join in on ground instruction to learn and teach with others. 3.Take every opportunity to fly with other instructors and pilots. Observe and learn.
Pittstown, NJ	Pilots Age 1. have honest discussion with older pilot if instructor notices some cognitive decline that may affect the pilot's safety	No response
Palo Alto, CA	No response	No response
Searcy, AR	No response	1. Student must learn to be PIC 2. SRM - teaching automation 3. CFI needs to set the good example 4. When debriefing student always find the good in what the accomplished in the lesson along with what needs work. Build a sandwich - top good stuff - middle needs correcting - bottom good stuff. 5. It is very important that the ACS is for evaluation only and not a syllabus to teach from. Never teach from the ACS.
Teterboro, NJ	No response	No response

Sanford, NC	1. Instill PIC mentality in student. Don't be too quick to rescue student. 2. Get feedback from student on instructor. 3. Seek better system knowledge.	1. Increasingly complex systems and congested airspace provide more things students must learn. 2. Missions have changed. Use of high performance and technically advanced aircraft has increased. 3. The Knowledge Tests really need to be more relevant. 4. Recognize use of technology instead of judgement is a hazard. 5. Recognize that attempting to be competent in almost everything makes awareness of limits of competence or capability more difficult.
Santa Rosa, CA	No response	1. This provided a great forum for discussion and learning among the Instructors and DPE present. Other than that, no other thoughts.
Fletcher, NC	1. Review and encourage airborne weather contacts. 2. Familiarize and encourage use of FSS website (www.afss.com)	1. keep up with electronics advances 2. primary stick and rudder skills 3. ACS is ok for testing 4. fly regularly
Norfolk, VA	1. Always keep the big picture	1. Need the younger CFI's to come to the CFI Open Forums. They are doing the bulk of the training and don't find the time to participate.
Philadelphia, PA	1. Fuel Management 2. Use case studies to help reinforce lessons.	Learning and staying in your comfort zone are not mutually exclusive.

Cedar City, UT Southern Utah University	No response	No response
Salt Lake City, UT	No response	No response
Logan, UT	No response	No response
Provo, UT	No response	No response
Fairbanks, AK	1. Aeronautical Decision Making - Let's not fly due to winds today, lead by example, train by using real life examples. Cancel due to weather, using checklists, set personal minimums. 2. Teaching pilots not to show boat and to fly within your abilities	1. Where is the data captured and disseminated that is collected from the yearly GAA Questionnaire that is put out and supported by the FAA. 2. The questionnaire could have been more meaningful if you put the phases of flight would have been used during asking a question. 3. More details about what the question was in reference too. 4. Would have been better to use NTSB accidents or scenarios to ask the questions about and discuss all of the 5 elements.
South Bend, IN	No response	1. Emphasize the importance of the Flight Review - not just "check the box" and go fly for another 24 months. Actual evaluation and training to proficiency required. 2. Better selection of and updated courses on FAASafety.gov. 3. Issues with using iPads/IOS software on FAASafety.gov. Courses won't run, etc. Predominate tablet in use today. 4. How do we reach the "unreachable"? Hundreds or even thousands of emails are sent to airman with minimal response in attendance at seminars. Topics? Presenters? Location? Technology?

		What's holding people back? 5. FAASafety.gov site has become very cluttered and somewhat difficult to navigate. Students and instructors get frustrated and give up on program.
Spokane, WA	No response	No response
Ann Arbor, MI	1. Introduce students to mechanics and become aware of their tasks 2. Emphasize normal check list usage 3. Conduct mock orals and check rides - stage check concept	1. Change slow flight to minimum controllable airspeed 2. Change stall recognition to the way it was in PTS
San Diego, CA	No response	No response
Cheyenne, WY	1. DPE's should are not exempt from responsibility for the applicants that they pass.	No response
Grand Forks, ND	No Response	No response
Aurora, OR	No response	Instruction is done very well but there is always something that can be improved. Continuing education is important for CFI's.
Mariposa, CA	No response	1. Understand meteorology 2. Weather briefing 3. Know limitations
Reno, NV	1. Fly the aircraft first. 2. Know the treats before you fly. 3. Maintain Situational Awareness. 4. Focus on use of rudder and trim 5. Integration	Each attendee had to make one comment on what would reduce GA accidents and this is a summary of what was said: 1.Fly the aircraft 2. Communicate better 3. Aviate, communicate, and navigate

	6. Know the risk of wake turbulence 7. Get time in a simulator/ AFTD 8. Decision Making and risk understanding	4. More briefing. 5. Risk Management 6. Know level of competency 7. Three strikes you're out 8. Stable 9. Attitude Flying 10. Rudder/ Trim 11.Wake Turbulence 12.Pilot state of mind 13.Cross wind landing training 14.Integration 15.GO_AROUNDS 16. Frequency of Flights 17. airspeed control 18. Fly aircraft with only rudder
Houston, TX	1. Flight Following use, Exposure 2. Guard frequency and usage. 3.Easier ways to find TFR's	No response
Brookings, SD	1. Toss a towel over all the flight instruments and let the student fly the aircraft only with outside visual cues.	1. Teach more of the logic and reasoning behind the rules.

	2. Cover the altimeter and have the student guess what altitudes they are at. 3. Teach flying by the magnetic compass only, cover up the DG.	2. Make sure the student understands the basics of aerodynamics. 3. Have the student spend some time up in a control tower wearing a headset next to controllers. 4. Teach students not to fly when fuel level gets below one quarter tank(s). 5. Teach students the difference between careless and reckless.
Vancouver, WA	No response	1. Allow Spin training for primary students 2. Add some sort of mental health evaluation to the medical standards, or provide CFIs with more tools. 3. Add more training drills to the Airplane Flying Handbook.
Mooresville, NC	No response	This was a good seminar with a wide range of participants - new CFIs to very experienced airline captains.
Bedford, MA	No response	1. Stage checks in any type of training are valuable tools for students and instructors. 2. Partial Panel in Glass Cockpits require some different instructional techniques and what is tested is not realistic.
Springfield, VT	1) Safety Concern - Non-Pilots observers, friends & family getting in way on glider ports	Weather in Glider Flying Handbook is watered down - needs to be corrected.
Eugene, OR	No response	1. Develop a CFI online improvement input system to provide material/examples and suggestions for these CFI briefings

Fort Meade, MD	Fuel exhaustion and starvation 1. visually check fuel before every flight. 2. know your rate of burn and how to lean 3. know your fuel system	1. too many topics for time frame. 2. nice to know the FAA is interested in meeting needs of CFIs.