

Achieving the Flight Instructor Course (FIC) Instructor Certificate

Part 1

In the first of a two-part article, Alan Newton – Head of Training at On Track Aviation – discusses what is involved in obtaining an EASA Flight Instructor Course Instructor Certificate.

Introduction

I often get asked about FIC (Flight Instructor Course) instructor certificates by potential candidates ever since the European Aviation Safety Agency (EASA) rewrote the rules for this qualification. In simple terms an FI with 500 hours of instructional experience can put themselves forward for an FIC instructor Assessment of Competence with a Flight Instructor Examiner (FIE) and if successful can then teach instructor courses at an Approved Training Organisation (ATO).

Many FI's who read this article will think to themselves well why not? Sounds straight forward enough, how hard can it be?

but the recommendation came from the CAA and not a Panel Examiner, after an application had been made via an application form. The interview and test were broadly similar in format and content except that the candidate after the interview was required to attend an FIC instructor training course (nominally 2 days) prior to taking the FIC instructor test.

I was heavily involved with the process under JAA as an interviewer, FIC instructor trainer and examiner. Indeed as the process evolved On-Track Aviation began to offer interview training courses to help candidates prepare themselves for what was to be an intense and full on day. In addition, On-Track Aviation also offered the FIC instructor training course. So my credentials are quite extensive when it comes to FIC instructor training and examining.

What's really involved under EASA?

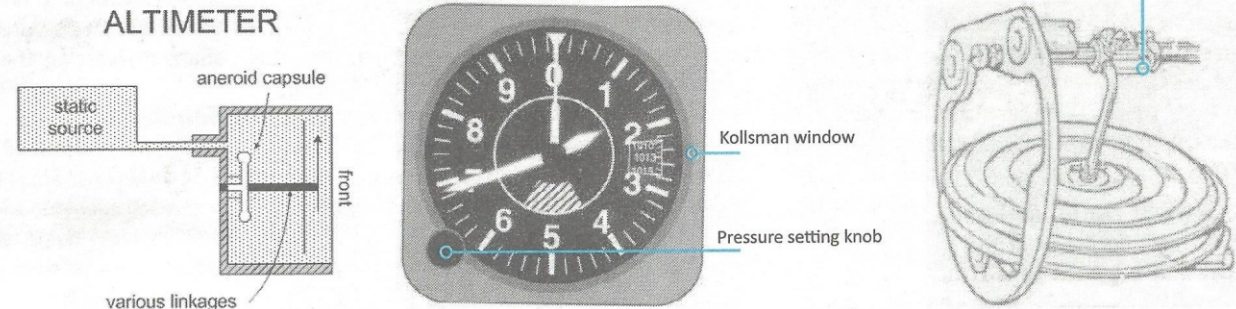
To become an FIC instructor requires not just the EASA prerequisites as described previously in this article, but also a sound understanding of the different instructor courses, above average teaching and learning techniques and instruc-

the capsule changes, by very small amounts, an intricate system of levers and gears magnifies its movements and makes a pointer rotate on a dial. Therefore, changes in air pressure become measurements of altitude.

In modern altimeters the single capsule is replaced by two or more capsules to give greater sensitivity for small changes in pressure. In addition, compensation for varying temperatures within the instrument casing is incorporated in the form of a bi-metallic strip inserted between the capsule and the system of levers and gears.

The reference pressure can be adjusted with a setting knob. The reference pressure (hectopascals or inches of mercury or millimetres of mercury) is displayed in a small 'Kollsman' window on the dial of the instrument. This is necessary, since the sea level atmospheric pressure at a given location varies over time with temperature and the movement of pressure systems. An altimeter cannot, however, be adjusted for variations in air temperature and therefore differences in air temperature from the ISA model will accordingly cause errors in indicated altitude.

Figure 1



single engine instructor courses eg FI, CRI SE, IRI, etc. Similarly, candidates who cannot teach for the Aerobatic Rating will not have the privilege to teach aerobatic instructor certificates and so on.

However, this is not the whole story. All FIC instructors must work within an ATO and the ATO must hold an approval from the National Authority to provide instructor courses. If the ATO only applies for FI course approval then the FIC instructor will be restricted to teaching FI courses only even though he/she maybe qualified to teach others.

So the bottom line is that you should have a complete and full knowledge of the types of instructor courses your instructor certificate would allow you to teach and what approvals the ATO holds or is applying for.

Having established what you would be able to teach the next requirement is to have a complete and full understanding of each type of instructor course eg prerequisites, training syllabus - theoretical knowledge and flying, type of training devices to be used - FNPT II, aeroplane, etc - and the amount of training allowed in each device, etc.

The only way to gain this information is to

Many FI's who read this article will think to themselves well why not? Sounds straight forward enough, how hard can it be? So they do some research on the internet or maybe chat to fellow instructors who have gained the qualification or attempted to gain it and the information forthcoming is not entirely clear cut for any number of reasons.

Having said that those candidates that end up reading On-Track Aviation's web page about the FIC instructor certificate are left in no doubt about what is involved.

So I thought it might be time to put something into writing about the FIC instructor certificate and how a prospective candidate may successfully achieve it. The following are my own views on the matter and are by no means definitive; however, those candidates who have followed my advice have been successful.

Before I pontificate on the ways and means of gaining an FIC instructor certificate I think I should explain my background and qualifications.

History

When I became an FIC instructor the CAA where not influenced by either JAA or EASA and the process was relatively simple. After an instructor test by a Panel Examiner (FIE in EASA speak), he/she was able to make a recommendation whether the applicant was suitable to become an FIC instructor. What followed was an interview at the CAA with a panel made up of industry FIEs and CAA staff examiners and if successful the applicant was then tested as an FIC instructor by one of the interview panel. Passing the test qualified you to teach instructor courses.

Under the JAA a similar process was adopted

tional ability allied with an above average theoretical knowledge base. The UK CAA decided to issue an Information Notice IN-2012/142 to help candidates appreciate what is involved.

So what is the reality? I'll address each issue separately starting with the theoretical knowledge.

Theoretical knowledge standard

This area tends to be the weakest for the majority of candidates wishing to become an FIC instructor. A good starting point to achieving the required theoretical knowledge is to review the question bank in the UK CAA Standards Document 10, Appendix 5. In Appendix 5 there are lots of questions which are grouped under headings associated with the PPL theoretical knowledge syllabus.

The prospective FIC instructor must be able to answer all of these questions and be able to explain the answers in simple terms using diagrams, reference documents, models, etc. The best way for me to explain this is to give an example of what I mean.

Q. With the aid of a suitable diagram, explain the basic principle of operation of the Altimeter?

A. An altimeter is nothing more than a sensitive barometer, which is an instrument that measures air pressure. The altimeter is calibrated to show the pressure directly as an altitude above mean sea level, in accordance with a mathematical model defined by the International Standard Atmosphere (ISA).

An altimeter consists of a partially evacuated aneroid capsule contained in an instrument case. The case is fed from the aeroplane static system. The capsule expands (as the static pressure falls) or contracts (as the static pressure rises). As

The answer to the question was fully developed and explained using basic principles and a suitable diagram (figure 1) with labels and a title to illustrate it. The area where most candidates fall down is in the explanation. It generally comes up short. For example:

The altimeter is fed by static pressure and as the capsule expands and contracts due to the change in static pressure the movement is transmitted to a calibrated dial to indicate the height of the aircraft.

Yes the answer is OK, but the depth of knowledge is shallow and the explanation of the operation is lacking depth. As an FIC instructor the answer should demonstrate a full explanation of the operation and a far deeper level of theoretical knowledge.

Candidates need to apply the same approach to all the questions in the UK CAA Standards Document 10 Appendix 5 in order to be successful at the FIC instructor Assessment of Competence. In order to do this I suggest that candidates work through each question and write out the answers - with diagrams where appropriate - referring to appropriate references for help. This process is going to take some time. The exact amount of time depends on the individual and their circumstances but I would imagine about 1-2 months on average.

The next area to be discussed is the instructor training courses themselves.

Types of instructor training courses

The type of instructor training an FIC instructor can do is based on the instructor certificates held by the FIC instructor candidate. Instructors who do not hold a certificate to teach Multi-Engine ratings will be restricted to teach

study the appropriate documents eg CAP 804, EASA Part FCL including the AMC and GM, UK CAA Flight Examiners Handbook, UK CAA Standards Document 10 and the ATO's Training Manuals.

The UK CAA documents can be downloaded for free from the UK CAA web site (www.caa.co.uk) however the EASA items are a bit trickier to find on the EASA web page (www.easa.eu). For example Part FCL is referred to as the Commission Regulation (EU) No 1178/2011 and not Part FCL. The clue to locating the documents is in the name 'Regulation'. So once on the EASA site click on 'Regulations' and then click on 'Aircrew' and this will take you to the documents.

TIP: Place your mouse pointer over each of the words to find the hyperlinks. Most are downloadable as PDF files. This will take a little time and effort so persist.

NOTE: Some of the downloads are .zip files and cannot be opened directly using an iPad/Mac computer without a suitable programme such as 'Archive Utility'.

Having now learnt about the instructor courses the FIC candidate needs to now learn how to teach them. This is best done using the ATO Training Manuals and direct exposure to actual instructor training at the ATO. At On-Track Aviation prospective FIC instructors will spend on average 4 months shadowing and watching instructor training courses being delivered by FIC instructors to instructor students. This exposure is vital as it helps the potential FIC instructor understand the way courses are taught and managed. Additionally, it exposes the FIC candidate to typical problems and issues trainees have whilst on the instructor training course. It is vital not to underestimate the relevance and impor-

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tance of this element of your preparation.

Legally only FIC instructors can teach on instructor courses and the prospective FIC instructor can only watch. However, after the formal teaching is complete you should be able to ask questions of both the trainee and the tutor improving your knowledge and understanding.

I am often asked by FIC instructor candidates if ATOs would really allow them to attend an instructor course to gain this valuable in site. I can't speak for other ATO's but On-Track Aviation does allow this but makes a charge for the privilege. Money well spent I would suggest. If the candidate is going to be instructing at his/her local ATO then I am sure an agreement can be reached between both parties to allow this participation.

The final aspect is the teaching and learning and instructional techniques preparation.

Teaching and learning and instructional techniques

Most instructors use a personal guide when teaching students on courses, and that's fine; but is the guide up to date? Does it reflect the EASA Syllabus / ATO Training Manual for the course? Most often they do not and here lies the first issue.

Any instructor, not just a prospective FIC instructor, should keep up to date with the latest syllabi for the courses they teach. My advice is to research the course syllabus using EASA Part FCL including the AMC and GM and cross check with the ATO Training Manual. Ensure you have a full and correct break down for each exercise.

Be aware of any alternative means of compliance that has been agreed by the National Authority and EASA eg in the UK there are alternative PPL and LAPL syllabi.

(these syllabi are available at the CAA website:

CAP 1298 – PPL(A)

CAP 1299 – LAPL(A)

CAP 1340 – PPL(H)

CAP 1341 – LAPL(H)

The syllabi are useable through-out the EASA states – Ed)

If you have purchased independent books and

This is a good example of WHAT a pilot should do but not HOW it is done.

The HOW we recover is; control column centrally forward until the warnings or buffet stops then hold the attitude. At the same time apply full power. Notice HOW the movement of the control column and power application has been quantified.

Another example: To level off from a full power 80kt climb. The WHAT is; select the level attitude and reduce the power to the cruise value and trim – Attitude, Power, Trim. The HOW is; select the straight and level attitude for 80kts, then progressively adjust the attitude and trim as the aeroplane accelerates to cruise speed - balance with rudder. Anticipate cruise speed by 5kts then set cruise power - remember the dead band on the throttle when reducing the power to the cruise value. Trim

You are giving the student the required information on HOW to complete the level off not just a statement of WHAT is required to level off.

Many instructors don't understand the teaching and learning logic

Flying is a tactile experience and students need to be shown hands on how to achieve control of the aeroplane. That seems simple enough, so why do instructors fail to do this? In my view it boils down to the basic understanding of teaching and learning principles.

Figure 2

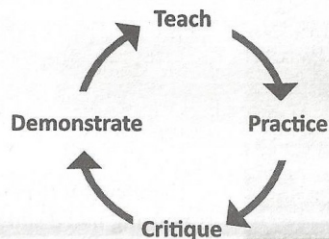


Figure 2 illustrates the teaching and learning circle which instructors shall follow during each lesson.

Before progressing onto describe each element I first what to explain the words 'Demon-

required to be learned. This demonstration is not a teaching exercise, however that does not mean the student shall not learn from it, on the contrary. The instructor may direct the students learning prior to the demonstration eg when demonstrating a turn the student can be directed to learn the visual attitude/picture with reference to the horizon/cockpit.

The instructor is simply using the student's time to best advantage during the demonstration. The student is learning; the instructor is not teaching.

Teach

The instructor shall now break down the manoeuvre into small chunks or building blocks and teach each one to the student. Prior to each building block being taught the instructor shall state 'follow me through on the controls'; the student places his hands and feet on the controls and can now feel the movements made by the instructor whilst observing the reaction of the aeroplane. How the instructor breaks down a manoeuvre is also important and can have a profound effect on the student's ability to learn. This is best illustrated by an example.

A turn is a manoeuvre consisting of 3 elements; entry, maintenance of the turn and exit or rolling out of the turn.

Q. Which element is best taught first?

A. It does not matter they all have to be taught so start at the beginning. This is often the response I get from instructors; the chronological approach. This method will work eventually but at the student's learning expense.

A better approach would be to analyse the exercise itself and establish what the main learning event is. In this case it is the maintenance of the turn. This is where the majority of the learning is done by the student. The entry and exit are transitory events and the latter may well have been practiced already during the straight and level exercise. By teaching the maintenance first you provide the student with the flying technique and work cycle to maintain a constant angle of bank, altitude and speed whilst looking out.

information and advice all his/her attention.

Additionally, the instructor, whilst talking to the student, can reposition the aeroplane for another practice or teach as appropriate without wasting valuable time.

The teaching and learning work cycle (see figure 2) can form a large circle or a small circle depending on the stage of the teaching and learning process e.g. initially Demo, Teach Practice, Critique - then maybe Teach, Practice, Critique - followed by Practice, Critique - followed by more Practice, Critique, etc.

The main stream courses such as the PPL or LAPL have exercises placed in a logical progression - building blocks, known to unknown - but others may require the instructor to make these decisions for him/her self. Having said that, the PPL or LAPL exercises can be taken out of order, however the instructor has to understand the priorities and basic teaching and learning concepts. For example, there is no point teaching the PFL exercise to a student who has not completed Glide Approaches; it will simply increase the instructor's work load and further steepen the student's learning curve resulting in poor learning at best.

Misunderstanding the instructor course aim

Potential FIC instructors seem to be under the impression that the instructor course is run in a very similar way to any other training course eg start at the beginning and work your way through each of the exercises in turn. One of my favourite questions to prospective FIC instructors is:

Given a free choice what exercise would you choose as the first one to teach an instructor student and why?

The answers generally were all the same: effects of controls part 1. The reason given was that this is the first of the PPL exercises taught to a student pilot. This clearly demonstrated to me lack of understanding of what the instructor course is all about.

The instructor course is about teaching and learning; understanding how to teach an exercise

training materials make sure they also reflect the latest EASA syllabi or alternative means of compliance. Don't assume check! Having completed this aspect it may require you to re-write your notes and briefings. Use this time to review and reflect on your personal teaching techniques.

Take the opportunity to discuss these exercises with an FIC instructor at the ATO; maybe give a pre-flight briefing and get some feedback on your delivery and content. It is often difficult to see your own failings, whereas a fresh set of eyes and ears can be invaluable at this stage.

When instructing you shall use a building block process working from the known to the unknown. Each exercise can be broken down into elements which then can be taught individually and then practiced by the student. Exercises shall follow a progressive learning pattern where the student can use some element of the previous exercise in the new one. For example: the student will have learnt how to maintain straight and level flight using a work cycle of LOOKOUT-ATTITUDE-INSTRUMENTS. When he is taught turning he can apply the same work cycle to maintaining a turn. If you are unsure what I am talking about then seek advice from an FIC instructor.

Here are some areas of concern I have encountered over the years.

Many instructors don't teach the HOW!

What I mean by this is best illustrated by an example. Let's consider the stall recovery. When asked to describe the stall recovery for their aeroplane most instructors will state; control column forward whilst simultaneously applying power.

strate' and 'Teach' because they seem to be misunderstood.

Before progressing onto describe each element I first what to explain the words 'Demonstrate' and 'Teach' because they seem to be misunderstood.

To demonstrate is to show the final manoeuvre or show a problem or effect. The student will not 'follow through' on the controls during the demonstration. There are two occasions when this will be used. One is to show the student at the start of an exercise what he will be able to achieve by the end of it eg demonstrating a steep turn before teaching it. The second is to show an effect which a student will never be required to reproduce, or as a demonstration of why something should not be done eg effect of 'g' on the stall, the effect of not maintaining the aeroplane in balance and so on.

To teach is to break down the skill into easily absorbed constituent parts, each of which the student will practice to gain mastery and confidence before progressing to the complete skill. During a teach the student will 'follow through' on the control(s) so that the instructor can show the amount of movement required whilst the student absorbs the visual impact of the control movement by looking at the attitude/instrument(s), etc.

A simple analogy; you would be hard pressed to learn to drive a car if you simply watched your instructor from the passenger seat!

Demonstrate

Prior to any exercise the instructor shall demonstrate to the student the manoeuvre

In order to achieve this, the instructor must ensure he/she flies the manoeuvre 'badly'; that is to say vary the angle of bank and show how to correct back to the datum; likewise vary the speed and altitude showing how to correct back to the datum in each case. There is no point in flying the manoeuvre accurately as the student will not learn how to correct faults.

Practice

Here is where the student gets the chance to put into action all that he/she has been taught. As the instructor you must allow the student time to practice and not just one practice either. On average you should allow the student at least 3 practices before you move on. There is good reason for this as a single practice that goes well does not necessarily prove the student has grasped the skill. However, should the next 2 practices go well then the chances are the student has indeed grasped the skill. Another issue I have come across is instructors following through on the controls during the student practices. This is unacceptable and sends the wrong message to the student. Additionally, it shows that the instructor hasn't got a robust enough teaching technique that requires him/her to guard the controls or he is under confident or a combination of both.

Critique

The biggest issue here is instructors talking to students whilst the student is flying (or trying to fly) the aeroplane. It should be second nature that the instructor takes control before any discussion takes place regarding the student's performance. This way the student can give the

to a student and how that exercise is best learnt by the student. The fact that the instructor course is based on the PPL syllabus is not important; one could use any rating or certificate syllabus and achieve the same outcome. As an FIC instructor this concept is fundamental and needs to be fully understood.

Going back to the question which exercise is completed first? Here are my thoughts.

The exercise shall be simple and uncomplicated so that the techniques for teaching and student learning can be easily explained to the student instructor. The building blocks and working from the known to the unknown need to be obvious. The exercise shall demonstrate why a logical approach to the teaching process is preferred rather than a chronological one and to show the benefits. Finally the student instructor will be flying the aeroplane for the first time from an unfamiliar seat and therefore the exercise should allow him/her time for flying practice without the added pressure of learning instructional techniques.

I believe the best PPL exercise that shows all of the above is Exercise 9 - Turning Part 1.

The rest of the instructor course exercises can then be done in order or to suit the weather. It is important to remember that the aim of the course is to teach a qualified pilot to instruct for a licence or rating, not to teach him/her to fly an aeroplane.

Alan Newton is the Head of Training at On-Track Aviation Limited an ATO based in Warwickshire which conducts instructor training courses. For further information go to www.ontrackaviation.com or call 01789842777.

Achieving the Flight Instructor Course (FIC) Instructor Certificate

Part 2

In the concluding section of a two-part article, Alan Newton – Head of Training at On Track Aviation – discusses what is involved in obtaining an EASA Flight Instructor Course Instructor Certificate, and what to do once you've achieved the qualification.

How will the theoretical knowledge and flight instruction be arranged?

I ask what does the ATO do? Then I get a blank look.

This is another area that prospective FIC instructors seem to overlook. The Flight Instructor (FI) course has many more hours of theory compared to flying (125 hours theory versus 30 hours flying); similarly the Class Rating Instructor (CRI) Single Engine course (35 hours theory versus 3 hours flying). Many FIC instructor

assimilate the teaching and do some homework prior to the 'give back'.

All of the above elements will take the average FIC candidate several weeks or months to perfect depending on the time and opportunities available. It is vital not to underestimate the importance of all of this preparation and give yourself time - realistic time - to cover it all.

Teaching from the PIC seat

Many potential FIC instructors overlook this aspect and think that it will be a straight forward conversion. In the majority of cases that is true but it still requires some thought especially if you intend to instruct in a tandem cockpit as your

if you have any of these is to experience a spin with a suitably qualified instructor. In general the more exposure you have to spinning the better your chances are of overcoming the disorientation aspects. This can also be true in part, for airsickness, but I am not a medical professional and I would therefore advise talking to an Aviation Medical Examiner (AME) if you do suffer from airsickness.

The chances are that most potential FIC instructors have never spun an aeroplane and therefore this issue needs to be addressed first. You should go and fly some spins in an aerobatic aeroplane with a suitably qualified instructor. Once you are comfortable with the spin then you

conducted by a CAA staff examiner or senior examiner in the UK.

Booking your assessment of competence is done through flight test bookings at the CAA. You should remember that the lead in time may be long, so allow for this in your plan.

Generally the examiner will come to your ATO/location to conduct the assessment. It is a long day and you will be exhausted by the end of it - and hopefully FIC instructor certified.

Once you have been allocated an examiner get in touch and ensure you have a suitable contact telephone and email address. Find out what subject the examiner would like you to

candidates simply state they will follow what the ATO does. A reasonable answer until I ask what does the ATO do? Then I get a blank look.

By all means use the ATO procedure but as a prospective FIC instructor you need to know what that procedure is. Reading the ATO Training Manual will be a good first step. Secondly sitting in on some of the courses will further bolster that understanding. There is no right or wrong answer to the question but the question needs to be answered fully.

There are many ways to complete the course; some ATOs conduct all the theory before completing the flying element. Others, including On-Track Aviation, integrate the course after an intense teaching and learning session of 25 hours at the beginning. Whatever way the course is put together the FIC instructor needs to be clear on its construction.

I then ask how the flying training is to be conducted. This also catches out the unprepared. How does the student instructor learn and then practice what he/she has learnt? Once again there is no right or wrong answer but an answer needs to be forthcoming.

Many schools adopt a give and give back process; where the student instructor is given the exercise by the FIC instructor and on a subsequent flight/day the student instructor gives the exercise back. Some schools do this process on the same flight; some do it on a completely separate flight and maybe on a different day. Once again the process needs to be known and understood. On-Track Aviation uses the "give and give back" on separate flights and on different days method', thus allowing the student instructor to

student may be sitting behind you. This means you will not be able to observe his/her actions; again this needs consideration.

Spinning

I have decided to devote a whole section to this subject as spinning forms a significant part of the FIC instructor skill set.

The flying training that leads to the award of a pilot's licence in the civilian arena does not normally involve spinning an aeroplane as part of the course. There is an element of spin awareness/avoidance training but to be honest it does not prepare the pilot for spinning. Additionally, there is a feeling amongst many pilots that spinning is dangerous and kills people. It can be dangerous and it has killed pilots over the years, but if it is flown correctly and with safety in mind it isn't as bad as some pilots make out. Yes there are risks but with suitable preparation and safety checks the risks can be reduced considerably.

Another rumour to dispel is that certain aeroplanes kill pilots when they spin. Not true. Lack of handling skills, understanding and safety precautions are causes of pilot fatalities when the aeroplane spins; not the aeroplane type.

Once you are comfortable with the spin then you need to learn how to teach it.

Finally there are the disorientation and airsickness issues to overcome. The best way to find out

need to learn how to teach it. Again this is best done by getting instruction from an FIC instructor who teaches spinning. Once again please do not underestimate the time this may take; several weeks or months depending on your availability, the instructor's availability, the weather and how you feel.

As an FIC instructor you will be required to teach spinning exercises to student instructors and remember they probably haven't spun an aeroplane during their flying career to date. So you will need to consider both initial spin training as well as instruction in how to teach spinning. Furthermore, on your FIC instructor assessment of competence you will be required to teach spinning.

Assessment of Competence

The FIC instructor assessment of competence follows the same format as any other instructor assessment of competence. In essence there are 4 main elements; Pre-flight brief, flight exercises, debrief and theoretical knowledge.

The main differences from a regular instructor assessment of competence are:

- the FIC instructor candidate flies from the PIC seat;
- the examiner will 'give' an exercise(s) as an instructor student to the FIC candidate;
- teaching spinning forms part of the assessment of competence in the UK;
- the teaching is aimed at a student instructor not a student pilot;
- the overall standard of the FIC instructor shall be above average;
- the assessment of competence is normally

give for the long briefing/theoretical knowledge lesson; be prepared for the examiner to ask you if you have a subject in mind. I always brief my FIC instructor candidates to prepare a lesson in advance to cover this possibility.

So what format can you expect the assessment of competence to take?

Normally the examiner will arrive in the morning and will brief you on the test content and format. An example of this briefing is given in figure 3 (see overleaf) There should be no surprises in the briefing if you have completed enough preparation.

The briefing will tell you which flight exercises the examiner wants to see and how they are to be taught. Remember that the examiner may decide to 'give back' an exercise as a student instructor.

The day will be mapped out making due allowance for breaks and lunch and you will be told the standard you are expected to achieve. The running order will generally be decided by the weather so be prepared to exercise some flexibility.

Typically on a nice day you can expect to complete the pre-flight briefing followed by the flight or flights depending on whether you need to change aeroplanes to carry out the spinning element. This will be followed by your prepared long briefing/theoretical knowledge lesson and questions.

The process will not be rushed. You will be given ample time to prepare for each part as well as take breaks for tea/coffee and lunch.

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ASSESSMENT OF COMPETENCE BRIEFING BY THE EXAMINER

ADMINISTRATION

Confirm with the candidate that the weather is suitable for the assessment (see note).

Note: Candidates shall comply with the minimum weather conditions specified in their Training Organisation's Flying Order Book or Operations Manual, or other more stringent limitations if applicable (eg State Minima).

Confirm the assessment requirement, type of aircraft(s), number of flights planned, etc.

Inspection of documents (as appropriate): licence, medical, course report, recommendation for assessment, application form, aircraft documents, flight manual, checklist, etc.

GENERAL BRIEFING Aim

The purpose of today's assessment is to assess your ability to give instruction to a student instructor both in the air and on the ground; therefore, throughout the assessment you will be assessed on the following:

- Preparation of resources;
- Creating a climate conducive to learning;
- Presentation of knowledge;
- Integration of Threat and Error Management (TEM) and CRM;
- Management of time to achieve training objectives;
- Facilitation of learning;
- Assessment trainee performance;
- Monitoring and reviewing progress;
- Evaluation of the training sessions;
- Reporting of outcome.

In addition you will be assessed on the following practical skills:

- Ability as an instructor to impart knowledge and skill;
- Flying ability, accuracy, demonstrations, airmanship and making efficient use of time and airspace;
- Knowledge of teaching exercises and their

necessary for the safe and practical conduct of the flight, in accordance with current legislation and the Training Organisation's Flying Order Book or Operations Manual. You are to assume that I am a student instructor and you can expect only limited assistance (however, I will have overall command of the aircraft and will sign the Tech Log where applicable).

- You should liaise with ATC. However, if ATC instructions conflict with the briefing then ATC will take priority; I will only intervene if I decide to do so for reasons of safety or clarification. Your call sign throughout the assessment will be.....

Planning

I will check your planning prior to the flight. I may question you on aspects of the planning, for example: choice of operating areas, altitudes, fuel planning, NOTAMS, mass and balance and performance calculations, etc.

Checks

- Throughout the assessment the approved aircraft checklist shall be used.
- Assume that the assessment is the first flight of the day and you will be expected to carry out a pre-flight inspection explaining to the 'student instructor' what you are checking and why.
- Airborne checks may be completed from memory, or from alternative notes, but must be in accordance with the checklist and each check item spoken aloud.

Assessment Tolerances

- You should be able to produce convincing demonstrations and therefore, your handling skills and flying accuracy should be of an above average standard. Therefore, as a minimum, the CPL Skill Test tolerances for height, speed and heading (100ft/10kts/10deg) shall apply.

Emergencies

- If we experience a real emergency or malfunction, the handling pilot will deal with it and the assessment will be suspended. The handling pilot is to achieve a safe flight configuration, I will give all the assistance required however, as Captain, I reserve the right to take control if necessary.
- Practice emergencies may be conducted as part of the flight exercise where applicable eg PFL, EFATO. You shall describe how any controls/switches are to be manipulated to simulate the malfunction.

ASSESSMENT ADMINISTRATION Role Play

I will play the part of a student instructor of average ability, who has completed all the elements of the course prior to today's lesson, including any pre-lesson study that you prescribed.

Definitions

- If I ask you to 'DEMONSTRATE' a manoeuvre I want you to fly the exercise as a demonstration of flying skill.
- If I ask you to 'PATTER' an exercise I want you to talk through as you fly the manoeuvre or exercise, bringing out any relevant teaching points but without breaking the exercise down into a lesson or giving student practice.
- If I ask you to 'TEACH' an exercise or manoeuvre, I want you to break down the exercise into its' relevant parts and devise a lesson giving me practice as a student and noting or correcting any faults that I might have.
- If I decide to 'GIVE BACK' an exercise I will do so as if I were a student instructor on a course where you are my FIC instructor. I want you to role play the student pilot under training and introduce appropriate faults. At the end of the exercise you are to correct any faults that

questions on subjects chosen from the theoretical knowledge subjects, which will be relevant to typical flying problems. You are to use these questions as a teaching situation and treat me as a student instructor. Use the board and any visual aids to illustrate your answers. Remember that this is an opportunity to demonstrate your teaching skills and not just an assessment of knowledge.

The subjects that you will be questioned on are considered to be fundamental to the syllabus and it is anticipated that having met the knowledge pre-requisite requirement for the course, you should already be familiar with the subject matter. However you will also be assessed on the ability to impart the knowledge of the subject to the student. Whilst assistance from notes, 'board plans', aids and other readily available reference materials is permissible to assist, this should not detract from the overall flow and continuity of the lesson.

ASSESSMENT SEQUENCE

I propose the following order of events: initially I will ask you to give me a short pre-flight brief. We will then carry out the flying exercises, after which you can debrief me as the student. We will then take a short lunch break after which we will follow on with the long briefing/theoretical knowledge lesson you have prepared, followed by theoretical knowledge questions. Finally I will debrief you on the day's activities, make my overall assessment and complete the paperwork. Are you happy with this format?

The main flight exercise I want you to teach me is

Secondary exercise(s) including spinning are

Other exercise(s) are

sequencing;

- Student involvement;
- Accuracy and synchronisation of 'patter';
- Technical knowledge and standardisation of exercises;
- Analysis, correction and debrief of faults.

Responsibilities

- You are to assume command and act as Captain of the aircraft in accordance with the Flight Manual and procedures for Single Pilot Operations.
- You will be responsible for the decisions

Should the aircraft deviate from these limits I will be looking for you to make smooth corrections without undue delay.

- In a similar way if you think you have made a mistake then correct it, don't let it worry you. Everyone makes mistakes, carry on with your flight, and concentrate on what you are doing.

Aircraft Control

When we need to pass control of the aircraft between us at any time, the standard procedure is to be used, ie, "Follow me through", - "You have control", - "I have control".

I might have and where appropriate show me the correct teaching methods.

Use of Notes

Whilst it is expected that you should have a sound understanding of the content of the flight exercise, occasional and judicious reference to notes is permissible throughout the assessment, however, this should not be to the detriment of the smooth flow or safety of the exercise.

Theoretical Knowledge Questions

On completion of the flight phase in the ground questioning, I will ask you some student

In the air you will teach me the main exercise and monitor me as a student. When I have seen enough of this exercise we will complete the secondary exercises we have agreed. For the secondary exercises you can assume that I've done all the required training up to that exercise and that I've been briefed before flight. After flight you will be required to debrief me on my performance as a student instructor. Other exercises will be covered by asking you to patter or demonstrate the exercises or by me conducting a give back of the exercise.

Figure 3

The pre-flight briefing should last around 20-25 minutes followed by a flight or flights which will total about 1.5-2 hours. The theoretical knowledge element will be made up of your prepared lesson (45 minutes) followed by some questions on the lesson and then by some theoretical knowledge questions. The theoretical knowledge element will take 2-3 hours.

At the end of the assessment the examiner will advise you of the result and offer you a debrief of the assessment.

So you've passed. What happens next?

Once the CAA has received the result of the assessment of competence your EASA licence will be re-issued indicating you have the privilege to teach instructor courses ie addition of the letter 'I' to your instructor privileges. Remember you cannot exercise the privilege until you have received your new licence.

This is just the beginning of your learning process as an FIC instructor. You should not feel isolated even if you are the sole holder of that privilege in the ATO. There are plenty of other instructors who hold the same privilege as you and they are all willing to help should you need it. From my experience the job is never black and white. Most of the time you are dealing with pilots who want to convert or upgrade or simply renew an instructor certificate and this inevitable means sifting through the CAA and EASA documentation to find the answers.

At On-Track Aviation we spend a great deal of time doing this for a variety of individuals and companies. So should you need help with any issues or enquiries please do not hesitate to call or email us. We are here to help.

Becoming an FIC instructor requires hard work and lots of study. It will improve your flying skills, it will hone your instructional techniques. Ultimately it will make you a better all-round pilot.



Alan Newton is the Head of Training at On-Track Aviation Limited, an ATO based in Warwickshire which conducts instructor training courses.

For further information go to www.ontrackaviation.com or call 01789842777.