THE UAS TRIBUNE

The Main Challenges of Harmonised Remote Pilot Training & Examination in the "Specific" Category

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In contrast to the "Open" category, candidates of the "Specific" category tend to be more "homogeneous". On the other hand, the areas of application for the "Specific" category are much more differentiated. This brings many challenges, especially regarding the standardisation of training and examination.

The two greatest challenges to be considered are:

- The development of uniform training and examination standards
- The guarantee of an uniform and recognised examination.

A Uniform Syllabus As a Basis

For a European remote pilot, it is essential that training and examinations are not only recognised throughout Europe, but can also be flexibly extended in any EASA member state. For the "Specific" category in particular, the application areas and operational scenarios are so diverse that additional competencies should be acquired in addition to existing qualifications.

For this to be possible, a uniform and universally recognised curriculum throughout Europe is vital. It is important that this is as detailed as possible so that different training companies can guarantee equivalent training. A mere compilation of subjects or topics is not sufficient as it leaves too much room for interpretation of standardised training.

While it may sound simple at first, there are numerous challenges that a curriculum must meet. First, it must identify the necessary training content; this can cause great debate even among experts, especially regarding the depth of knowledge. For example, a balance must be struck between imparting sufficient technical knowledge and providing easily accessible training.

The field of unmanned aviation, in particular, often deals with rapid technical developments. The curriculum must not only reflect these, but also provide them in good time so that the training companies and authorities can adapt to them at an early stage. This is currently difficult to achieve, given the European harmonisation and publication processes. The situation, where a training school delivers state-of-the-art, but nevertheless outdated, training that does not comply with this curriculum, must be avoided.

Furthermore, regionally specific requirements pose a challenge for a universally valid curriculum. There are two options here: either various regional specifics are incorporated into the general curriculum, which is likely to make it significantly more comprehensive, or alternatively, additional training must be provided for certain operational scenarios. As long as this can be provided in an uncomplicated manner (possibly through self-study), the advantage of this option is that the general curriculum can concentrate on the essential points.

Furthermore, the linguistic hurdles of the multilingual European society should not be underestimated. The standard language in aviation is English, but English is not equally accessible to everyone. Translations into other languages, however, can quickly lead to inaccuracies or interpretations of technical terms, which in the worst case, can impact safety.

Flexibility with Standardised Modules

Due to the wide range of application scenarios within the "Specific" category, modularisation of the learning and examination content is a natural choice. Through this, a «flexible harmonisation» can be achieved – standardised modules can cover a subject, a topic or a sub-topic area and, as such, can be used flexibly.

A qualification's training programme then, in turn, consists of defined modules. Each module is defined by a detailed and standardised curriculum, as described above.

Modularisation also allows for limited individualisation of qualifications by requiring additional modules for use under certain conditions. For example, a member state could define an additional module for a mountainous region that must be completed before operating in that region. It must then be determined how such information can be published and how the completion of additional modules can be proven.

Uniform and Recognised Examinations

In addition to standardised training in the "Specific" category, examinations must also be harmonised throughout Europe. It is immaterial whether the competent aviation authority carries out the examination itself or whether it passes this task on to authorised bodies. With the latter option, there are many examining bodies, which makes a high degree of examination standardisation inevitable.

One method already practised in professional aviation in Europe is a European standardised question database, which is made available to the national aviation authorities by EASA. Regular updates ensure that feedback is incorporated and that the database remains up to date. The national authorities are responsible for the examination itself and the implementation of the database in an electronic examination system.

A possible way forward in the area of unmanned aircraft

systems (UAS) could be to use a uniform question database that is standardised on the basis of the syllabus mentioned above. In the core training areas, this would ensure that examinations in Europe are uniform and comparable, and thus also mutually recognisable without any disputes.

A question database such as this could concentrate on core areas, at least initially, and be expanded and adapted as required. If national aviation authorities see a need for additional questions, these could be added or commissioned by the authority themselves. However, it is essential to ensure that the development of these questions considers the common syllabus as this is the only way to ensure uniformity and comparability.

The Way Forward

In order to achieve the above-mentioned goals, a path that is as pragmatic as it is inclusive must be chosen. The requirements and needs of national aviation authorities must be taken into account, and these needs must also be of a level that they can be universally accepted. Modules, detailed learning objectives and any additional questions must then be developed on this basis of universality.

Promising results have already been achieved in working groups involving member states, as well as EASA and subject matter experts. Going forward, experts from industry and education, aviation authorities, and other stakeholders should be implicated.

The initiation of USE Working Group 2205-1 was a first step in this direction. This working group consists of 4 subgroups and 19 focus groups that deal with the challenges of standardised training and examination in detail, including both the development of detailed learning objectives for theoretical and practical training as well as any prerequisites for this (for example, the definition of important terms).

It would be desirable for the team of this USE working group to be joined by other experts from European countries to work together on the foundations of standardised European UAS ratings for the “Specific” category.

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