

Technická univerzita v Košiciach, Letecká fakulta

## HODNOTENIE HABILITAČNEJ PRÁCE

### POSUDOK OPONENTA PRÁCE

Názov práce: **Komparatívna analýza a validácia edukačného systému prípravy pilotov pre špecifického prevádzkovateľa v Slovenskej republike**

Autor: **Ing. Róbert Rozenberg, PhD., Ing.-Paed.IGIP**

Odbor habilitačného konania *Doprava*

Akad. rok: *2019/2020*

a inauguračného konania:

Oponent: **doc. dr hab. inž. Jaroslav Kozuba, prof. nadv.**

Pracovisko oponenta: *Letecka Faculta*

#### KOMENTÁR OPONENTA HABILITAČNEJ PRÁCE

##### AKTUÁLNOŠŤ ZVOLENEJ TÉMY HABILITAČNEJ PRÁCE:

The dynamic development of technology and the use of increasingly sophisticated materials used in the construction of aircraft place aircraft operators - the pilots - on ever-increasing demands. Today's pilot, no matter what type of aviation, has ceased to be an operator of a simple human-machine mechanical system. The 21st-century pilot is an operator of a complex multidimensional system functioning in a heterogeneous multitasking environment, which places particularly high demands on him.

This situation means that the pilot training system is also undergoing dynamic transformations, regardless of whether we mean basic or vocational training system or improvement after reaching the level of training specified in the requirements of aviation law to perform specific operational activities in the air. Activities related to changes in the subject system have to meet three main groups of requirements: safety, ability to perform a specific group of aviation tasks and optimization of training costs..

Considering the fact that an aircraft pilot, regardless of the type of aviation, type of task carried out, or the time period taken into account is considered to be the main causative factor of adverse flight events, this training takes on a special dimension. It should be emphasized that training of a military pilot, prepared to perform tasks in a particularly dangerous one, characterized by a particularly high level of additional threats not found in the task environment of a civil pilot, means that even higher requirements are imposed on this particular training system.

Therefore, it should be recognized that the topic of the dissertation is current, what is more, especially important from the point of view of preparing a military pilot to perform aviation tasks at the required level of quality and safety.

##### METÓDY SPRACOVANIA HABILITAČNEJ PRÁCE:

The author has chosen methods of research with relevant validity in compliance with the content of the investigated area and the presented dissertation's aims. The basic scientific method that has been chosen by the author is analysis. From the author's references, it can be seen that the author also used a lot of his own sources, domestic and foreign, which had to be sorted and analyzed. In his research he applied the principles of contemplative science and his own experience for systematic problem identification, collecting information and forming hypotheses on the basis of which he assigned the aims of his dissertation.

##### DOSIAHNUTÉ VÝSLEDKY HABILITAČNEJ PRÁCE A NOVÉ POZNATKY:

Implementation of the main aim of dissertation in the form of an integrated pilot competence development system implemented under the university education program and practical training of pilots based on international aviation regulations - Part-FLC and those in force in the Air Force of the Armed Forces of the Slovak Republic - Chapter 4. dissertation, could be an important scientific contribution in the theoretical sense - integration of the civil and military system in relation to pilot education and training. From a practical point of view, this program introduces the latest assumption of pilot training currently implemented by EASA based on teaching methods and tools such as lectures, lectures on CBT, own learning, progress tests, KSA exercises (including connecting objects/thinking skills), group classes/trips.

##### PRÍNOS PRE ĎALŠÍ ROZVOJ VEDY A TECHNIKY (UMENIA):

As a major contribution to science we can consider the author's approach to military pilot education and training. It is worthy to underline that the most final result reached by the Author can be simply introduced in the process of civil pilot education and practical training. In his dissertation, the author presents pilot education and training as a gradual process whose main aims are pilot competency. The competency forming is done by a wide spectrum of educational and training activity by using modern synthetic tools as well. it should be treated as a very modern approach to pilot education and training.

An intention of the habilitation dissertation is not only to enrich the existing theory about the current knowledge but its versatile, practical application in theoretical and practical pilot training. The author proposed the continuous process of pilot training which consists of three basic elements: theoretical training - synthetic training - practical training, all of them are highly connected with self-evaluation of trainee pilot. What more, the author proposed methodology, tools and good practice that can be used at each stage of this process.

The utilization of the results obtained in the research is conditioned, in practical aspect by their application to the existing process of the military pilot's education in the Slovak Republic. Moreover, dissertation theoretical results have been partly utilized by the author by publishing numerous scientific articles and presented papers at national and international conferences.

## **PRIPOMIENKY A POZNÁMKY K HABILITAČNEJ PRÁCI:**

The habilitation dissertation contains 148 pages, which can be considered as a typical quantity of such work. In the dissertation, the author uses plenty of in-text citations that otherwise increase the truthfulness and originality but, on the other hand, there are definitions of terms that should be known to the reader (e.g. the term „analyticko-syntetická metóda“ page 52). Language proficiency is at a quite high level. The used terminology is proper and so are the definitions of special terms.

The author analyzed 77 items of literature on the subject, but only one of them is foreign (item 12). Considering the fact that the work is largely based on the research carried out by the author within the department and their results, I understand that the missing items can be found in the positions of the scientific studies which were identified in literature on the subject of the study, where Eng. Robert Rozenberg, Ph.D. was the author or co-author. Moreover, the author referred to source texts that were not on the list of literature that was used as part of the development of the dissertation, e.g. Part-FCL (p. 83).

There are some small editorial mistakes that, however, does not have any influence on the quality of the presented habilitation dissertation. According to delivered materials the author full field all formal criteria connected with the habilitation process as well.

## **OTÁZKY K RIEŠENEJ PROBLEMATIKE:**

- What is the role of the modern tools of pilot education and training in reaching by him / her competences demanded by the Air Force of the Armed Forces of the Slovak Republic?
- Do you see the place for implementation of the HF, CRM and MCC training in the proposed educational and practical pilot training? Has been such training introduced in Air Force of the Armed Forces of the Slovak Republic yet?
- Specify what research methods and techniques - theoretical and empirical - were used by the author in the processes of the research conducted for the purpose of achieving the dissertation objectives? Please characterize the analytic-synthetic methods.
- Could the author specify what research methods and techniques - both theoretical and empirical - were used by the author in the processes of the research conducted for the purpose of achieving the dissertation objectives? Please, characterize the analytic-synthetic methods.

## **SPLNENIE SLEDOVANÝCH CIEĽOV HABILITAČNEJ PRÁCE:**

The solution to each of the research problems identified at the beginning completes the author's final conclusion. The variety of research problems required analyzing a wide spectrum of didactic data and data of practical flight training necessary to solve individual research problems. The author chose demanding goals that could be achieved only with the help of extensive theoretical knowledge in the field of aviation education and training based on international and national aviation regulations and legal acts of the Air Force of the Armed Forces of the Slovak Republic. This knowledge was supported by extensive practical experience, which the author acquired as a military pilot-instructor, which, combined with the results of a thorough analysis of the current state of knowledge, gave the expected results by achieving the main goal of the dissertation. All research problems and the main purpose of the work set by the author were achieved to the extent required for this type of scientific work.

## **CELKOVÉ ZHODNOTENIE HABILITAČNEJ A ZÁVER:**

The habilitation dissertation submitted by Eng. pil. Robert Rozenberg, Ph.D. Fulfilled the requirements of §76, odst. 6, zákona č.131/2002 (Higher Education Law).

I recommend habilitation dissertation to be defended and, after the successful process, I recommend to habilitation commission that Eng. pil. Robert Rozenberg, Ph.D. should be awarded by the Scientific Council of the Faculty of Aeronautics, Technical University Kosice the title: docent (in abbreviation „doc.“).

Predloženú habilitačnú prácu na základe predchádzajúceho hodnotenia

**ODPORÚČAM prijať k obhajobe**

a po jej obhájení navrhujem udeliť vedecko-pedagogický titul "docent (doc.) v odbore "

Podpisom na tomto posudku zároveň súhlasím s licenčnými podmienkami obsiahnutými v licenčnej zmluve na použitie posudku záverečnej práce, ktorá je súčasťou tohto posudku.

Dátum: 28.03.2020 .....  
podpis autora posudku