

# Eugene Kmita

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## The Comparative Studies of Air Traffic Controllers' Professional Communicative Competence Development Methodical Systems of Canada, Germany and Russia

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**Eugene KMITA**

Training and Certification Center of Ukrainian State Air Traffic Services Enterprise,  
Ukraine

## **The Comparative Studies of Air Traffic Controllers' Professional Communicative Competence Development Methodical Systems of Canada, Germany and Russia**

### **Urgency**

The civil aviation in the countries of American continent, western Europe and east – Slavonic countries is belongs to the branch with the special conditions of working activity realization, which define the specific of future and working air traffic controllers. These conditions are the result of such circumstances as hyper – responsibility for the working results, strict requests to professional knowledge, skills and habits, high responsibility during decision making in the lack of time conditions. So aviation specialist professional training system in whole is created to provide the reliability and professional competence of graduate and working aviation controller [*Професійна...*].

In common air traffic controllers professional foreign language communicative competence, necessary for radiotelephony function realization during the work on international airlines suggests the mastering general English, aviation English and standard phraseology. The last is the core of professional aviation speaking, but it is not enough for radiotelephony in whole, moreover it is impossible to master phraseology without general English knowledge; and it must be supplemented with the knowledge of aviation terminology.

But, as professional training system is a complex phenomena, which elements are organic and interactive, and each of elements can't function as a whole system and can't function out of system [Макаров, Герасименко 1997; *Рекомендації...* 2010], so the separation of radiotelephony training in the process of professional training is rather conditional, because it directly leans on each of other components, exists at their boards and doesn't exist out of professional training system. But radiotelephony training in the countries of American continent, western Europe and east – Slavonic countries covers the air traffic control training aspects to the extent of techniques of professional language speaking, besides one of the reasons of aviation catastrophes is still the language one.

The necessity of comparative studies of air traffic controllers' (in further – ATC) professional communicative competence development methodical systems of Canada, Germany and Russia is the results of following factors:

- 1) the „gaps” in ATC language training, which become the reasons of different non-standard situations and aviation catastrophes;
- 2) the differences and contradictions of methodical systems of the countries, mentioned above;
- 3) the necessity of ATC professional communicative competence development universal system creation;
- 4) the development of aviation personnel and air safety have to become a result of such universal system creation.

### **The analysis of last researches, relating to the problem, described in the article**

The professional pedagogics and psychology includes many researches, relating to the aspects of professional competence and foreign language training. The aspects of professional competence are described in the works of E.M. Ver-shachagin, B.D. Elkonin, M.I. Lukjanova, M.M. Bahtin, G.S. Danilova, V.M. Monakhov, N.V. Kuzmina, A.K. Markova, N.P. Grishina, N.M. Lobanova, O.I. Nizhnikov, I.A. Zyazyun, B. Ekman, K. Birdwhistle, L.A. Petrovska, Y.M. Zhukov, V.O. Slastyonin, L.V. Shcherba, V.V. Yagupov and other scientists. The pedagogical technologies of foreign language training are described in the works of such scientists as T.A. Arkharova, I.L. Bim, V.A. Bukhbinder, G.V. Barabkova, B.S. Gershunsky, O.O. Leontjev, I.Y. Lerner, M.M. Skatkin, N.K. Sklyarenko, O.O. Mirolyubov, A.K. Kudinov, A. Iapidus, G.V. Rogov, V.S. Tsetlin and others. Nowadays its development is in process because of the necessity of aviation specialists' professional training methodological systems creation on the base of state standards of higher education.

Radiotelephony in English is regulating by the proper documents of ICAO and Eurocontrol (Rules of the Air and Air Traffic Service. Doc. 4444 // RAC/501/12; Manual on Radiotelephony (Doc. 9432-AN/925), ICAO Doc. AN 9835, ATCO Licensing Review Task Force (ALRTF) – *Guidelines for Competence Assessment*, EATMP Human Resources Team. European Manual of Personnel licensing – Air traffic Controllers, An English Illustrated Handbook For Civil Aviation Specialists, Safety Regulation Committee - Assessment of the EATMP „European Manual of Personnel Licensing – Air Traffic Controllers” – as a means of compliance with ESARR 5-0 SRC Doc 13 i ih.)

The analysis of these and other researches showed that implementation of term „professional communicative competence”, its content and structure into the sphere of aviation controllers' professional training is one-sided enough (for example, its definition, given by Eurocontrol organization is not accurate and have a common character, the process of professional training takes into account only some of its components etc.) with the necessity of overcoming of different methodological, theoretical and practical difficulties, differences and contradictions specified by, for example, the peculiarities of air traffic controllers' profes-

sional communicative competence development methodical systems of Canada, Germany and Russia. Due to different understandings of ATCO professional communicative competence content, the differences and contradictions of air traffic controllers' professional communicative competence development methodical systems of Canada, Germany and Russia and the necessity of ATC professional communicative competence development universal system creation, we concretize the comparative studies of air traffic controllers' professional communicative competence development methodical systems of Canada, Germany and Russia in this article.

### **The description of main research material.**

Let's describe the differences and similarities of air traffic controllers' professional communicative competence development methodical systems according to the main elements of methodical system.

#### The principles of refresher and conversional training

**Canada.** The training process can be characterized by the following principles: course content selection, training time management, motivation, the expected learner's training progress, first language competence and educational base.

**Germany.** The training process can be characterized by the following principles: communicativeness, functionality, system quantification and the modularity principle.

**Russia.** The training process can be characterized by the following principles: competence approach, modularity, training 'till the result', variability, individualization, communicative approach etc.

As a result of these countries general methodical principles comparison it's necessary to mention the specific unity of training organization and realization, targeting at result in Canada, the accent at functionality, structure and order in Germany and the specific 'overall' and variety of approaches to professional communicative competence in Russia.

#### The aim of refresher and conversional training

##### **Canada**

The aim of the course is a periodical regular maintenance/restoration of previously received and provision of additional knowledge, skills and habits, which are necessary for realization of functional duties in specific conditions and confirmation of ATC professional competence level, who ratings are: TWR (and/or APP APS), APP and APS and/or ACP and ACS.

##### **Germany**

The learners have to reach the level of language competence, which is not less than ICAO 4<sup>th</sup> working level, according to all six aspects of language skill mastering.

### ***Russia***

The improvement of aviation English, radiotelephony knowledge and the acquisition of new knowledge, skills and habits, relating to air traffic provision and services of foreign airlines aircraft.

As a result of aims comparison it's necessary to mention the tendency of professional communicative competence development during ATC professional competence development in whole in Canada, the accent at functionality, structure and order in Germany and the specific 'overall' and variety of approaches to professional communicative competence in Russia.

#### The plot of refresher and conversational training

### ***Canada***

The learners shall be aware of:

- The possibilities and limitations of a man during ATS;
- *Radiotelephony and phraseology (standard, non-standard situations and aviation catastrophes)*, etc [Макаров, Герасименко 1997; *Рекомендации...* 2010].

The learners shall have skills of:

- Exchanging the information, relating to air traffic, with the adjacent sectors/working positions;
- Reporting the aircraft crews about modes, trajectories, flight routes for descending before landing and climbing after take off, calculating and providing the intervals of transmitting, reception, transmitting the controller information and requests to the crews, relating to the flight rules at the given route;
- Making the decisions, relating to request (recommendation) on missed approach;
- Giving approval, relating to landing, take off, aerodrome traffic circuit entrance, ATS zone entrance, maneuvering area entrance, giving recommendations to aircraft crews relating to diverting to alternative airfield.

### ***Germany***

The development of the following elements of ATC competence [*Рекомендации...* 2010; *Человеческий...* 1993]:

- *Knowledge*: grammar structure; sentence building; vocabulary (the improvement of vocabulary),
- *Skills of*: strict and correct communication (speaking),
- *Interactive behaviour*: immediate, proper and informative speaking.

### ***Russia***

In the borders of refresher training course according to the subject „Aviation English” the main attention is focuses in grammatical skills and habits development, improvement of vocabulary, lexis and activation of English phraseology usage.

As a result of comparison it's necessary to mention the tendency of professional communicative competence development during ATC professional com-

petence development in whole in Canada, the accent at clearness, functionality and communication in Germany and the inter-level transition and the program plot's carrying to training aim in Russia.

#### The methods of refresher and conversational training

**Canada** – Berlits method, classes, training in companies, distance learning and training with the partners.

**Germany** – the unity of content and function, discussions, role play, presentations.

**Russia** – active methods, distance learning, differentiated learning, optimization of obligatory classes.

In this case it's necessary to mention the usage of specific 'mixture' of old and new methods in the process of ATC professional competence development and support of e-technologies with differentiation in the countries of American continent, western Europe and east – Slavonic countries.

#### The types of refresher and conversational training

##### **Canada**

Classes, theoretical training, computer-based training, practical training, simulation and on-the-job training.

##### **Germany**

Modular training, computer-based training, practical training (using a lot of practical exercises), part-task training (simulation).

##### **Russia**

Theoretical training, independent training, simulation, ATC – play, debriefing.

As a result of ATC refresher and conversational training types comparison in these countries it's necessary to mention the tendency, relating to the separation of simulation from practical training in Canada and Germany universities and the assignment of ATC –play as a separate type of training relating to professional communicative competence development in Russia.

#### The technical aids of refresher and conversational training

In's necessary to mention that in the countries of American continent, western Europe and east – Slavonic countries the process of refresher and conversational training is characterized by one and the same set of training technical aids. This set includes: training – and –methodical literature and materials, classrooms with proper equipment (for example, computer classes), audio- and video-laboratories, briefing and debriefing classes, high-fidelity controller simulators, training software etc.

#### The assessment of professional communicative competence development

##### **Canada** – Tests

**Germany** – Entry, intermediate and final oral and written examinations.

**Russia** – Exams, differentiated exams, tests

As a result of assessment types comparison in these countries it's necessary to mention the tendency, relating to the great variation of assessment types in universities of Germany and Russia, but assessment of ATC professional communicative competence development in Canada.

## **Conclusions**

The analysis of similarities and differences of ATC professional communicative competence development methodical systems of Canada, Germany and Russia have demonstrated the possibility of these systems' most useful elements consolidation into universal system of air traffic controllers professional communicative competence development.

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## **Abstract**

In this article the comparative studies of air traffic controllers' professional communicative competence development methodical systems of Canada, Germany and Russia were held. The comparison was held according to the main components of methodical system.

**Keywords:** air traffic control, air traffic controller, professional communicative competence, methodical system, Canada, Germany, Russia, principles, methods, content and types of professional training.