In 2016 the system of PhD training in the third level of higher education was introduced in Ukraine. These changes are aimed at incorporating Ukraine into a common European educational space for the creation of joint PhD programs and projects, increasing the mobility of postgraduate students and the teaching staff of universities and research institutes.

Using the Research Gate scientific network the survey of experts (faculty members of the universities) was conducted on the quantity and quality of publications necessary for the presentation of the results of the dissertation research and the defense of the PhD thesis [1]. According to the survey, it was revealed that at present the requirements for the publication of research results differ by country.

Some expert information was obtained from a survey of European partners on ERASMUS + projects as: “Structuring cooperation in doctoral research, transferable skills training, and academic writing instruction in Ukraine’s regions” (DocHub) and “Promoting internationalization of research through establishment and operationalization of Cycle 3 quality assurance system in line with the European integration” (C3QA) [2].

The analysis of the requirements for publication of the results of dissertations showed the significant differences by countries.

Currently, in Ukraine there is a norm according to which at least five publications in scientific (in particular, electronic) professional editions of Ukraine and other states on the subject of the dissertation for obtaining the degree of a candidate of science are required, of which:

At least one article in scientific periodicals of other states on the subject of dissertation is prepared. Such a publication may equate to publication in Ukrainian publications, which are included in international science-computer bases;

One of the articles may be published in the electronic scientific specialty;

In the fields of natural sciences and engineering, the patent for the invention (the author’s certificate of invention), which passed the qualification examination and directly relates to the scientific results of the dissertation (if any), may be annexed instead of one article [3].

Nowadays this order is valid. However, the Ministry of Education and Science of Ukraine presented the draft Order on the awarding of scientific degrees [4].
Specifically, it stipulates that, on the topic of the dissertation for the degree of a doctor of philosophy, at least three scientific publications are required, of which:

At least one article in scientific periodicals of other states on the subject of dissertation is prepared. Such a publication may equate to a publication in the scientific specialized editions of Ukraine, which are included in the international science-computer bases, recommended by the National Agency;

One article can be published in the electronic scientific special edition;

From the branches of knowledge of the natural and technical direction, instead of one article, one patent for the invention (the author’s certificate of invention), which has passed the qualification examination and directly relates to the scientific results of the dissertation (if any), may be added;

No more than one manual (for dissertations in the field of pedagogical knowledge);

Instead of one article, a monograph, in particular collective, may be included;

Articles in scientific national and international peer-reviewed journals included in the list of scientific professional publications.

The situation in the countries of former Soviet Union is similar. For example, in Azerbaijan 5 peer-reviewed published articles are required.

In the UK, Ireland, New Zealand, Australia and the USA there are the traditional PhD by dissertation and a PhD by publication. The PhD by publication means that the candidate’s thesis is based largely on the supervised research project, but examined on the basis of a series of peer-reviewed academic papers which have been published or accepted for publication, usually accompanied by an over-arching paper that presents the overall introduction and conclusions. The defense of the traditional dissertation does not therefore require the obligatory preliminary publication of the research results.

In Finland, a PhD dissertation is usually written in the form of an author’s monograph, so publication of individual results in the form of articles is not required. Recently, a paper-based thesis, which includes about 80 pages of summary and 4 articles in peer-reviewed journals, is gaining popularity. It is supposed that 3 articles can be written in co-authorship, and one is individual.

In Austria this is related to the discipline in which a person does his PhD thesis. In computer science, for example, one should provide approximately three publications. And it is quite individual to the universities.

In Poland, the prior publication for a PhD is based on new solution in PhD process in which the student can get special financing from Ministry when he or she tries to apply the new research-based solution in business. Such PhD process is supervised by two supervisors: one from the university, another from the business the solution is prepared for. Such a solution enables the managers
to create new knowledge and transmit it to the academia. Thus, according to the regulations, one article is enough for the defense.

Bulgarian PhD has two national documents that provide the framework of the procedure: “Act for the Development of the Academic Staff in the Republic of Bulgaria” and “Regulations for the Application of the Act for the Development of the Academic Staff in the Republic of Bulgaria”. None of the documents contains regulations on the publication of the results of the dissertation research.

There are no general regulations for universities in the Czech Republic; it is usually established by single faculty and specific subject of PhD thesis. No regulation concerning indexing, but it is preferable to publish the articles in journals with high impact factor as well as in Scopus or Web of Science. Each PhD thesis and its thematic focus are evaluated individually.

In Turkey, you need to have either one international research project or one article that is indexed by Social Sciences Citation Index via the Web of Science (SSCI). This is a mandatory requirement for the defense of PhD dissertations.

In Tunisia the doctoral candidate must have at least one publication (whose name appears as principal author) in an indexed and abstracted journal in Thomson Reuters, but for the literary (English, French, Sociology, Law) a publication in an indexed and abstracted journal. To publish his results, the doctoral student must have the agreement of his thesis supervisor.

In South Africa, there are no laid-down requirements for prior publications for a PhD. Despite this PhD students submit one peer-reviewed and indexed journal publication with an international and reputable journal before submitting the thesis.

Regulations for Award of PhD Degree in Indian universities are framed in suppression of the UGC (University Grants Commission) [5]. PhD research scholars shall publish at least one research paper in peer-reviewed refereed journal, duly approved by the UGC/University, and make two paper presentations in conferences, recognized by the Department Council concerned, before the submission of the thesis for adjudication and produce evidence for the same in the form of presentation certificates and reprints. All the central, state, private universities are following the above regulation across the country.

In Zimbabwe some universities require two peer-reviewed published articles. There is no standard and norm to the number of articles and each university has its own prescriptions.

As for Fiji Higher Education Commission (FHEC), there is no clear guideline for publication activity within the PhD process. Universities may impose own rules, but it is certainly possible to get a PhD with no publication.

Doctoral students in Peru are not obligated to have publications in indexed journals. They just make their research and present to their colleagues.
So, one can see the sufficient differentiation in the regulation of publication activity of PhD students by countries.

**Conclusion**

In our opinion, it is necessary to unify the requirements for the publication of the results of the dissertation research around the world. Identity of requirements will facilitate the recognition of research results and degrees, which in turn will promote international mobility of scientists and improve the quality of research in general.

**Literature**

1. Survey of experts as faculty members of the universities was conducted on the quantity and quality of publications necessary for the presentation of the results of the dissertation research and the defense of the PhD dissertation. - Access mode: https://www.researchgate.net/post/What_is_the_number_and_quality_of_publications_necessary_for_the_defense_of_a_PhD_thesis_in_different_countries?view=59a932985b49521843303ff5.

2. ERASMUS+ Project «Promoting internationalization of research through establishment and operationalization of Cycle 3 quality assurance system in line with the European integration” (C3QA). - Access mode: http://c3-qa.com/.

