

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ  
ФАКУЛЬТЕТ ІНОЗЕМНОЇ ФІЛОЛОГІЇ  
ТА СОЦІАЛЬНИХ КОМУНІКАЦІЙ**



# **СОЦІАЛЬНО-ГУМАНІТАРНІ АСПЕКТИ РОЗВИТКУ СУЧАСНОГО СУСПІЛЬСТВА**

**МАТЕРІАЛИ ВСЕУКРАЇНСЬКОЇ НАУКОВОЇ КОНФЕРЕНЦІЇ ВИКЛАДАЧІВ,  
АСПІРАНТІВ, СПІВРОБІТНИКІВ ТА СТУДЕНТІВ**

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opportunity of learning alternative technologies applied abroad is of great interest.

The math modeling of the processes of the holes machining is being built. The results will be used to find possible ways of decreasing the deviation. There is also an intention to broaden knowledge in modeling technologies.

In the frame of the research, the problem of central holes with noncontinuous surfaces of impellers and its derivation as a cause of vibration increase is being investigated.

The preliminary results show that inelastic deformations might be a huge problem; however the technology heredity thought the whole manufacturing and assembling processes is ideal. The next step is making math models to get approximate results and test them through natural experiments.

Since, those deformations on the sides of keyway are smaller than the radius of metal cutting tool's edge, so the methods of removing them can be rubbing or honing. Both processes are characterized by a number of disadvantages.

One possible tool, suggested for solving the above described problem, is combination of hone and rubber. The tool suggested in the paper may be used effectively not only in impeller production, but also for manufacturing of any other curved surface hole.

After introduction of the suggested innovation into the modern manufacturing process the UA companies may occupy higher market positions.

## **CERTIFICATION OF THE TEACHING STAFF IN DISTANCE EDUCATION**

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Globalization of educational environment and technological progress put forward new requirements for the competence of teachers as a major factor in ensuring the competitiveness of universities. One of the most popular and current methods of evaluation of knowledge, abilities and skills of the teaching staff (TS) is a certification. Unfortunately, even today quite a lot of schools do not understand the content of the certification process, mistakenly identifying it with certification and other conformity assessment procedure. Certification of teachers is a procedure to match the quality of their characteristics to the requirements of national and international standards, designed to assess the level of professionalism under external professional standards that developed

out of a particular institution. Availability of competent teaching staff is a sign of a good university level as a whole.

Lately the experts begin to think about the issues of implementation of the certification of university lecturers in Ukraine. Distance Education (DE) is no exception. Institutes, due to the rapid growth of interest in distance learning, are looking for ways to improve and one aspect of providing a high level of educational services is improving competence of the teaching staff in information education.

Improving the professional competence of teachers is typical due to a lot of reasons, but in our view, you should begin studying the issue of the establishment and development of criteria for objective assessment of their knowledge and skills in the field of education, which in turn will shape the overall evaluation of teachers distance learning.

The problem of evaluation of competency of TS in the DE needs detailed study and, above all, you need to start work from the analysis of the criteria of traditional forms of education, since, due to the specific characteristics of the national teachers' education in Ukraine is not able to practice only as a teacher distance learning. It serves as part of a large system undoubtedly influenced by external factors. This fact requires taking into account not only the criteria of competence teacher in DE but also criteria related to evaluation and the environment in which it operates, i.e., criteria for assessing TS skills and knowledge typical for classical education.

The question of TS competence in the implementation of competitive distance learning should be on the top spot. Study and analysis criteria for assessing the skills and knowledge of teachers DE lead to a growth in DE popularity in Ukraine, which in turn will lead to the popularity of Ukrainian universities in the world and increase the enrollment of domestic students and foreign students from other countries.

Our analysis of criteria of competence of teachers in classical and distance education made it possible to establish that the roles of teachers in these forms of education are significantly different, but to separate these criteria is not possible. Defining the role of a teacher in distance education is not possible without the involvement of the criteria of classical education. In further studies, we will strive for a deeper disclosure of the issue of TS certification in the DE area. We aim to study the issue of increasing the level of TS competence for blended learning, namely, engineering specialties.

## References

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## **SYNERGETIC APPROACH TO THE DESCRIPTION OF REALIZATION OF THE PRODUCT AT THE STAGES OF DESIGN, MANUFACTURING AND OPERATION**

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Efficiency of programmable logic controller functioning is in many respects connected with presence of corresponding objective laws of management, which are capable to consider condition and changes of the internal and the external environment. Problems management of such dynamic systems are rather relevant and require new theoretical approaches. A present economic crisis is an acknowledgement of that.

As the research of complex systems shows [1], representation of the self-organizing system is reduced to the self-coordinated description of time dependences of order parametre, the interfaced to its field and the operating parametre. As efficiency of realisation of programmable logic controller is defined at its operation, then it is necessary to accept the production function of maintaining (using) system  $Q$  as an order parametre. Accordingly, the conjugated field represents the production function of making system  $G$ , and the operating parametre  $F$  characterises a gain of scientific and technical results. As a results, the problem is reduced to an expression of the specified quantities' change rates  $\dot{Q}, \dot{G}, \dot{F}$  through their values  $Q, G, F$ .