



QUALITY HYBRID EDUCATION EVALUATION: ACADEMIC STAFF PERFORMANCE ASSESSMENT (CASES: BORYS GRINCHENKO KYIV UNIVERSITY AND THE UNIVERSITY OF SILESIA)

Nataliia Morze¹, Hanna Pavlova², Eugenia Smyrnova-Trybulska³

^{1,2}*Department of the Information Technology and Mathematical Disciplines, Borys Grinchenko Kyiv University, Ukraine {[n.morze](mailto:n.morze@kubg.edu.ua); [h.pavlova](mailto:h.pavlova@kubg.edu.ua)}@kubg.edu.ua}*

³*Department of Humanistic Education and Auxiliary Sciences of Pedagogy, the Faculty of Ethnology and Sciences of Education, University of Silesia in Katowice, Poland {esmyrnova@us.edu.pl}*

ABSTRACT

The process of adjusting transformation of education to dynamics of civilization development requires from systems of education to respond to constant corrections from all the stakeholders, agents and processes to upgrade its elements and parameters, which can be facilitated by real-time feedbacks at all levels of systems. Studying quality education in the context of the goals that the mankind has been setting for its sustainable development helps realize the changes in the attributes of educational system and subsystem elements, given quality of education reflects a level of disorder providing objective data on interactions of system elements and their discord with normative goals forecast for certain educational systems. The paper analyzes hybrid education as a form of education which is being determined by transformation of educational systems under applying ICTs for educational processes and by external factors connected with determining sustainable development and with hybridization of environment, which requires new instruments for quality assessment that are currently being under development.

KEYWORDS

Hybrid education; e-Environment; e-portfolio; academic staff quality assessment; ICTs.

1 INTRODUCTION

Quality education is a core issue due to the fact that systemic understanding of systems of education and educational systems as open social systems triggered a more profound scientific interest in doing research on their internal and external communication processes, as well as environments in which the abovementioned systems undergo certain organizational phenomena – emerging, forming, developing, transforming, etc. The process of adjusting transformation of education to dynamics of civilization development, namely a shift from getting qualifications in the first part of life to lifelong acquiring of new knowledge, skills and competences, is one of the key quality education characteristics. The transformation requires systems of education to be responsive to constant corrections from all the stakeholders, agents and processes to upgrade its elements and parameters, which can be facilitated by real-time feedbacks at all levels of systems. Moreover, being an open platform for organized and disorganized human activities, relations, communication and interaction, educational systems are multivariable systems that integrate the

complex dynamics of living into human conscience to let people realize themselves as personalities and social agents.

2 PROBLEM STATEMENT

Hybrid education is a form of education which is being determined by transformation of educational systems under applying ICTs for educational processes and by external factors connected with determining sustainable development as the main goal for the mankind, as well as with hybridization of environment, where e-Environment has been turned from artificially created environment into a constituent part of environment that serves as a platform for saving scarce resources and optimizing resource allocation, both on the national and global levels. Hybrid education preconditions emerging new communication and interaction forms and processes among new and old elements of educational systems/systems of educations at different levels. Quality hybrid education requires new instruments for quality assessment which are currently being under development. Openness and transparency of HEI outputs, regarding inputs, is one of the indicators of quality education [Barton 2004; Morze, Buynytska, Kocharian, 2015; D'Antoni 2009]. Academic staff performance should be measured and assessed applying new requirements for being competitive under e-Environment and hybrid education. Hence, e-Environment of the University should include e-portfolio as an open decentralized constituent part containing web-pages of agents with qualitative and quantitative indicators of their academic performance. The indicators should be prioritized in accordance with objectives of HEI. The case study of Borys Grinchenko Kyiv University shows that using wiki-technology for e-portfolio to be created and filled in is one of the most efficient considering the data about academic performance of the academic staff, structural units, divisions and subdivisions, and the University to be transparent and openly accessed. The case study of the University of Silesia proves that Academic Teacher's Sheet reflects a flexibility of the process of adapting the performance assessment tools to the new requirements for quality education [Morze, 2010; Morze, Buynytska, Kocharian, 2015].

Purpose of the study is to analyze e-portfolio as a tool for quality hybrid education assessment.

Research methods applied are comparative, analyses, systematization, logics and other general research methods.

3 DISCUSSION

“E-portfolio” as a tool for academic staff quality assessment (Case Study: Borys Grinchenko Kyiv University).

Various quantitative and qualitative indicators of educational interaction in the digital space of HEI are supposed to be evaluated in order to determine a role of virtual part of the educational environment. Providing virtual educational processes in digital space is impossible without improving HEI technical information infrastructure, along with evaluating simultaneously the effectiveness of its use. In functional digital learning space all agents (students, teachers, administration) possess special profiles. Complex learning systems provide the facilities for collaboratively creation, cataloguing, publishing, editing and tracking content, for managing user's database, for student behavioural tracking. There are different approaches to the evaluation of the quality of a virtual learning environment. Formal methods analyse information system data using conventional statistical methods or utilizing the advanced data mining methods. Among relatively new, closely related, contemporary research areas are Educational Data Mining and Learning Analytics, comprising systematic harvesting of data generated during the interaction of stakeholders with the virtual learning environments [Drlik, Svec, Skalka, 2014].

It is necessary to analyse objective data describing availability of electronic resources and the way they are used, openness of environment, virtual communications activity, effectiveness of evaluation and control mechanisms in a virtual educational environment [Morze 2010]. Yet, objective data analysis of the functioning system might not contribute to the quality of educational outcomes evaluation in all cases. Considering the European standard of quality in higher education (ESG), it is possible to distinguish the main directions of university virtual environment quality assessment.

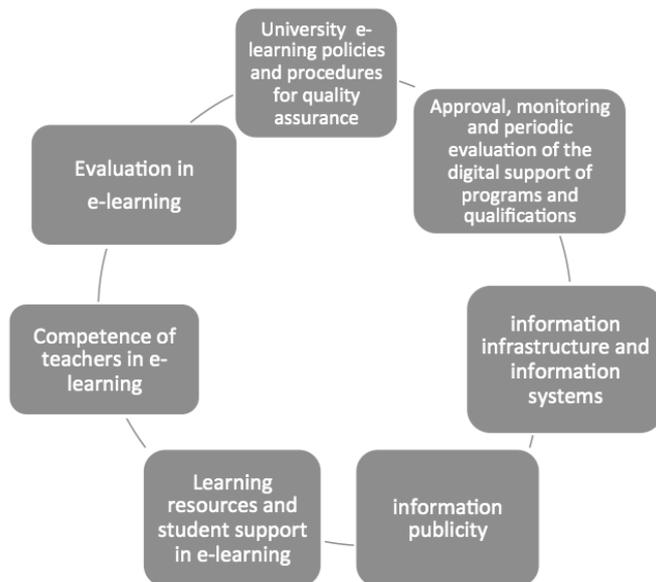


Figure 1 Direction of assessing the quality of higher education in accordance with ESG (Source: http://www.eua.be/Libraries/quality-assurance/esg_2015.pdf?sfvrsn=0)

To understand quality of such agents of educational process as academic staff of HEI, and Borys Grinchenko Kyiv University, in particular, as well as quality transformation due to the requirements and challenges of nowadays, we need to refer to the Law on Higher Education which states that quality and presence of the openness of universities are a priority. Implementing it as a legal framework for reforms in higher education, we have to develop a system of internal ratings BGKU staff – E-portfolio (<http://e-portfolio.kubg.edu.ua>). The system displays all the activities of scientific and pedagogical staff that affect the performance of quality assurance of the University in line with the European standards. The relationship among the indicators of “e-portfolio” with e-Environment and quality standards of education is shown in Figure 2 [Morze, Varchenko-Trotsenko, 2014].

The key indicators of the system “e-portfolio” from which an internal rating of the scientific-pedagogical staff of BGKU calculated, is scientific research activity (40%) containing profile data scientist at Google Scholar, the number of publications in international journals, monographs, textbooks, participation in international and national research projects; teaching activity (40%) - developed and certified electronic training courses, participation in international, national games and competitions; professional development (20%) - training, training, grants, scholarships, copyright, etc.

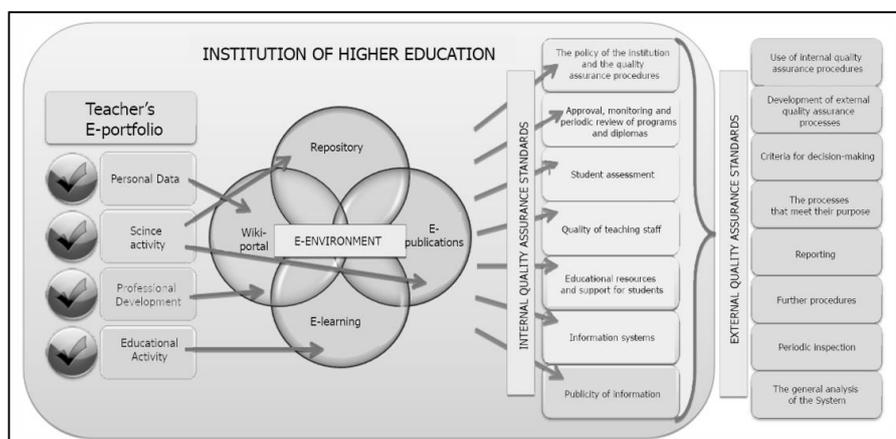


Figure 2 Relationship between e-portfolio, e-Environment and quality standards of education (Source: Morze, Varchenko-Trotsenko 2014)

As it was approved by the Academic Council of BGKU, weighting coefficients automated system is operated counting points of each employee. The system provides the ability to update points over a period of such year. The system allows scientific-pedagogical staff to rank for institutions, units, departments, positions, academic titles, which, in our opinion, will promote competition between the scientific-pedagogical staff of BGKU and enhance all types of employees.

The main stages of the implementation of the system “e-portfolio” at BGKU are the following:

1. analysis of the international and national experience of portfolio in systems of education;
2. working out the structure for e-portfolio adopted by the Scientific Council of the University;
3. adoption of weighing coefficients;
4. survey of the academic staff about their attitude towards e-portfolio;
5. designing the system “e-portfolio” and testing it;
6. seminars for the academic staff about e-portfolio model and the instructions for filling it;
7. filling e-portfolio and consultations;
8. survey of the academic staff about conveniences/inconveniences while filling e-portfolio;
9. consultations on the structure of e-portfolio and its weighing coefficients with representatives of the structural units of BGKU;
10. modification of the structure of e-portfolio and its weighing coefficients;
11. regulations on e-portfolio.

The incentives for the implementation of the system “e-portfolio” are;

1. rating of the structural unit;
2. increasing recognition among the academic staff;
3. assessing academic staff performance and achievements.

All the members of the academic staff of BGKU have a possibility to make their offers on the structure of weighing coefficients using common tables for different groups of experts: administration, heads of departments and chairs, professors, associate professors, lecturers, tutors, etc. The regulations on e-portfolio are modified at real time mode considering the outcomes of common discussions, applying the methodology of expert evaluation.

4 FINDINGS

The use of ICTs is affecting the process of transformation of quality of education under new changing conditions of the human existence, i.e.:

- knowledge accumulation and new improved technology of its further creation, distribution and implementation as a constituent part of the economic growth and a priority objective of sustainable investments;
- redefinition of the concept of property with a further rethinking of possibilities for using intellectual property as a source of opportunities for social mobility (both vertical and horizontal);

- new understanding of the mission of education in modern conditions under which education is both the most important component of the economic growth and strategic resources of the country, the quality of which often determines its sovereignty and national defense;
- transformation of knowledge into social resources and education activity into a process of providing education services which defines quality of education as a degree of satisfaction of wants and needs of the agents with a correspondent and adequate diversification of forms and techniques of education quality management;
- egalitarian education as a key factor in overcoming the gap among the developed countries and the developing ones (quality of education is an ongoing process of development and transformation of education systems in order to make them achieve a desired ideal state in a temporal projection);
- a brand new concept of the role of government intervention into education regarding contradictions between freedom and responsibility of an individual for exercising their right to be free in a democratic society, as well as contradictions between authority and freedom during individual development considering freedom of individual development to be an axiological determinant of education;
- unlimited/limited access to information and ICTs;
- development and implementation of lifelong education;
- shifting education from the national priorities to global ones with the integration of the national systems at the global level, which makes it possible to assess quality of education applying common indicators to enable the mobility of the agents of education;
- development and implementation of distance learning, e-learning and hybrid education as one of the forms of egalitarian education;
- diversification of education functions and development including a wide range of various kinds and forms of the existing education systems' diversification (with a number of diversified education institutions); diversification of training programmes (diversified education services); technological diversification (diversified components of training processes; diversified methods and techniques of education and training, etc.);
- democracy and mass education;
- humanization and liberalization as a priority for the development of all the forms of social consciousness in the context of which the mission of education is to form fundamental principles allowing a person to solve their outlook problems, to make ethical, legal, or ideological choices, to adequately react in a socio-cultural situation;
- multicultural education to ensure harmony during the implementation of humanistic principles and ethno-cultural orientation of training process in order to secure individual, social and humanity progressive development.

IES of HEI presents (or is to present) an adaptation model of the global and national informative spaces and inherits its most prominent functional properties: in the communicative aspect, IES is presented as the space of common teaching activity on the ICT basis, in the integrative aspect, it is assumed as realization

of common actions via installation of the corresponding rules and the adoption of normative documents, i.e. the space can be formed and developed only in accordance with the goals and the tasks of the abovementioned spaces, regarding the normative base of informational policy at the international and national levels, the condition and the perspectives of development of the informational interaction means, the features of teaching realization in educational institution [Bykov 2008, Izvozchokov 1999]. The analysis of science-pedagogical sources has led to distinguishing the following features of such space formation:

- IES is a multicomponent pedagogical system that includes informational, technological and organizational resources;
- when forming IES, it is necessary to solve the problem of the correlation of the traditional components of educational process and ICTs;
- in the informational space, the role of teacher IC-competence increases because, namely, the professor (docent, senior teacher, assistant) decides in which quality, volume and with what purposes IES resources could be used, i.e. the teacher is the one of the most active participants of such space formation.

The open information and education e-Environment of HEI contributes to efficiency and quality of learning processes, intensification of scientific research, an increase in efficiency and effectiveness of university administration and the education system as a whole, integration of national educational information systems in the global network that facilitates access to international information resources in education, science and culture. An obligatory condition for its use and development is openness and transparency.

To ensure the quality of the educational activities of the university, it is necessary to adhere to standards and guidelines developed by the European Association for quality assurance. Key quality indicators are used in the most authoritative world rankings of universities. Analysis of world rankings and using them to implement internal rating systems makes it possible to identify weaknesses, activities to develop further and to develop strategies to improve management decisions and the intensification of structural units and employees to improve the quality of educational services at the university. Improvement of the problem of quality indicators of educational activities is a necessary condition for the development and compliance with the education policy of the university and its corporate standards.

Internal ratings system makes it possible to determine the place of a teacher, department, Institute of the University as a whole and their contribution to creating a positive vector of development activity of academic staff of the university influences the formation and development of e-environment, which is essential to ensure the quality of educational activity.

E-portfolio is a tool for academic staff performance and quality assessment, being one of the indicators of HEI quality education and quality hybrid education at the same time. It is essential for the academic staff to use that tool for self-assessment to understand their level of competitiveness on the market of educational services, as well as to realize their places in the hierarchical structure of HEI. Filling e-portfolio that is based on certain weighing coefficients bears tangible and intangible consequences. E-portfolio indicators should include those indicators that are crucial for HEI development at the real time, whereas such indicators should coincide with the ones that are used by reliable international rating systems.

Assessment based on e-portfolio should be extended to the overall assessment of quality of all agents of educational processes, including students and other stakeholders, which will give an opportunity to estimate and correlate educational systems for them to respond real time to urgent challenges the humanity could face.

5 QUALITY EDUCATION ASSESSMENT AT THE UNIVERSITY OF SILESIA USING ACADEMIC TEACHER'S SHEET.

At the University of Silesia an electronic system "Academic Teacher's Sheet" was introduced and launched (http://sojk.us.edu.pl/karta_nauczyciela/?page=main). The purpose of this system is to enable academic teachers to gather in the computer system all information regarding their professional and academic careers. Due to the amendment to the Law on Higher Education and its secondary legislation and the need to adapt the tools to the new requirements, the effective date of the Charter of the Teacher Academic was suspended until the end of the summer semester 2014/2015 by a decision of the Academic Team for Quality of Education. The "Academic Teacher's Charter" electronic system comprises several categories and items to be filled in by each academic teacher, via the teacher's personal account and profile in the system:

Education and career record

- Academic promotions
- Professional experience;
- Prizes and awards
- Results of periodic evaluations
- Comments by PKA / UKA
- Other achievements

Research activity

- Scientific publications
- Books
- Chapters of monographs
- Artistic activity
- Conferences/artistic events
- Research trips
- Research projects
- PhD students that have been successfully graduated
- Reviews of research/publication/academic promotions
- Reviews of work for print
- Reviews and discussions – review journals
- Scientific speeches/ lectures
- Patents and inventions
- Development of scientific advice
- Other scientific achievements
- Teaching activities/popularizing activities

- Teaching classes
- Successfully promoted papers
- Mentoring for students
- Reviews of work
- Development of teaching aids
- Popular science lectures and talks
- Promotional activities
- Other teaching achievements (e.g. e-learning courses)

Organizational activity

- Functions at the University
- Promotional Events
- Preparation of teaching plans
- Preparing schedules of classes
- Functions in scientific societies
- Functions in magazines and journals
- Other organizational measures

All personal data, as well as didactic, scientific and organizational achievements of the academic teachers (e-portfolio), is collected and available in USOS system. Bibliography of the publications of the academic staff of the University of Silesia is available and open on the web-site of the university library. Every year each academic teacher should submit a completed Academic Teacher's Sheet for evaluation by the Faculty Commission for Quality. Such sheets are assessed according to relevant scores reflecting the teacher's research, didactic and organisational achievements. Some other faculty and university services were described in several other publications [Smyrnova-Trybulska 2012, 2015].

CONCLUSIONS

The open information and education e-Environment of HEI contributes to efficiency and quality of learning processes, intensification of scientific research, an increase in efficiency and effectiveness of university administration and the education system as a whole, integration of national educational information systems in the global network that facilitates access to international information resources in education, science and culture. An obligatory condition for its use and development is openness and transparency.

To ensure the quality of the educational activities of the university, it is necessary to adhere to standards and guidelines developed by the European Association for quality assurance. Key quality indicators are used in the most authoritative world rankings of universities. Analysis of world rankings and using them to implement internal rating systems makes it possible to identify weaknesses, activities to develop further and to develop strategies to improve management decisions and the intensification of structural units and employees to improve the quality of educational services at the university. Improvement of the problem of quality indicators of educational activities is a necessary condition for the development and compliance with the education policy of the university and its corporate standards.

Internal ratings system makes it possible to determine the place of a teacher, department, Institute of the University as a whole and their contribution to creating a positive vector of development activity of academic staff of the university influences the formation and development of e-environment, which is essential to ensure the quality of educational activity.

The experience of the Borys Grinchenko Kyiv University shows that to ensure qualitative educational activity, a strategy and plans of the University along with section “Assurance of Quality Education” should be adopted; indicators for assurance of internal quality standards should be developed; corporate standards of a university should be developed and a qualitative open electronic informational and educational environment should be created. The experience of the University of Silesia proves that flexibility of the process of adapting the performance assessment tools to the new requirements for hybrid quality education is facilitated by ICTs used for designing, maintaining and servicing Academic Teacher's Sheet.

ACKNOWLEDGMENTS

This research study received, within the framework of the IRNet project, funding from the People Programme (Marie Curie Actions) of the European Union’s Seventh Framework Programme FP7/2007-2013/ under REA grant agreement No: PIRSES-GA-2013-612536.

REFERENCES

- Authorisation system of academic teachers publications at the University of Silesia [on-line] [cit. 20160908] Available from http://bibliografia.bg.ue.katowice.pl/Scripts/CGIIP.EXE/WService=proweb_ue/prlogin.w
- Barton Mary R. (2004). *Creating an Institutional Repository: LEADIRS Workbook* [online] / Barton M., Waters M.// MIT Libraries' Digital Institutional Repository. 134 p. [cit. 20120908] Available from <http://hdl.handle.net/1721.1/26698>
- Bykov Valerii.Y. (2008). *Automatized informational systems of the common informational space of the education and science* In: Collection of scientific works of Pavlo Tychyna Uman State Pedagogical university. - Uman: SEA Zhovtyi. pp.47-56.
- D’Antoni S. (2009). Introduction. In: *Open Educational Resources: Conversations in Cyberspace* edited by S. D’Antoni and C. Savage [online] UNESCO Publishing. [cit. 20120908] Available from <http://unesdoc.unesco.org/images/0018/001816/181682e.pdf> ISBN 978-92-3-104085-6
- Department of Quality of Education, University of Silesia [on-line] [cit. 20160908] Available from <https://www.us.edu.pl/szjk/biuro-ds-jakosci-ksztalcenia>
- Documents and links on Quality of Education, University of Silesia [on-line] [cit. 20160908] Available from <http://www.us.edu.pl/szjk/dokumenty-i-linki-dotyczace-jakosci-ksztalcenia>
- Drlík M., Švec P. & Skalka J. (2014, May 5-7). *Comparison of approaches to the data analysis in the virtual learning environments* In: DIVAI 2014 – Distance Learning in Applied Informatics. Conference Proceedings. Editors: M. Turčáni, M. Drlík, J. Kapusta & P. Švec, Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Department of Informatics, Nitra, pp. 561-572.
- Izvozchikov Valerii A. (1999). *The conception of the pedagogy of the informational society*. In V. Izvozchokov , V. Laptev & M. Potemkin. *Science and school. 1.*, pp. 41-45.
- Morze Nataliia V., Buynytska Oksana P. & Kocharian Artur B. (2015). *Competency-oriented education: quality assurance* In Ogneviuk V.O., Khoruzhaya L.L. et al. Section II. *IC-competence of teachers and students as a way to formation of information educational environment of the university*. pp.151-196: Kyiv, Borys Grinchenko Kyiv University.
- Morze Nataliia V. (2010). Creation of the electronic library of the university in the EPrints environment. *Science journal of National Pedagogical Dragomanov University*. 5(22).

Morze Nataliia V. (2010). *Institutional repository of the modern university and realization ways of the opened access initiative*. In N.V. Morze & O.G. Kuzminska. II International forum «The problems of informational society development». K.: UkrINTEI– pp. 252.

MORZE Nataliia V. & VARCHENKO-TROTSSENKO Lilia. (2014). E-portfolio as a tool for measuring the profesor's performance of a modern university. *Computer science and information technology in schools*. 5.

Plan of activities of the Academic Team for Quality of Education, University of Silesia [on-line] [cit. 20160908] Available from http://www.us.edu.pl/sites/all/files/www/SZiDJK/pliki/2012-11-05_Plan_pracy_UZJK.pdf

Smyrnova-Trybulska E. (2012). *Information and Educational Environment of the Faculty of Ethnology and Sciences of Education on the Internet* In ICT for Competitiveness 2012, Silesian University in Opava, School of Bissness Administration in Karvina, p. 236-243.

Smyrnova-Trybulska E. (2015, May 12-13). *Information and Educational Environment of the University: a Case Study* In: V.V.Laptev. High-Tech Educational Informational Environment: Proceedings of the International Scientific Conference, Saint Petersburg, pp. 25-39.