

SUMMARY

Title of the doctoral dissertation:

A Method of Integrated Assessment of Managing Academic e-Learning

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Polish academics have been enriching didactics with various forms of Internet and modern information technologies (IT) for over 20 years. The role of e-education in Poland has started to become crucial in blended learning, as well as full on-line courses and studies. Therefore, e-learning is not a new phenomenon for Polish universities. However, the lack of holistic analyses and descriptions of e-learning applications and roles in educational services is the shortcoming of current literature. There is also no consistent concept, nor a management system devoted to academic e-learning activities. Academic e-learning units are mostly based on the toolset required for external evaluation and projects. This toolset is available but was developed mainly for traditional education. This research problem forms the foundations of the presented dissertation.

The main goal of the dissertation is an adaptation of the integrated method of effectiveness assessment of techno-organizational ventures, which include multidimensional aspects, modules and measures, for the purpose of academic e-learning units.

To achieve the main goal, a main research hypothesis was formulated, ie.

< Exploitation of the modified (adapted) integrated method of effectiveness assessment of techno-organizational ventures enables complex assessment of academic e-learning units and supports the management processes in such units.>

The subject of the dissertation is the phenomenon of academic e-learning in the context of assessment of related activities (of different nature) with the specific focus on effectiveness categories.

The object of the dissertation is a group of academic e-learning units, which:

- operate under auspices of public and non-public universities in Poland;
- to some extent are administratively autonomous within a university organizational structure,

– are in the exploitation phase.

The spatial scope of the dissertation covers the Republic of Poland, and the time scope covers the period of 2016-2019.

In order to achieve the formulated goals, answers for research questions, and verification of hypotheses a multistage research process was applied. Ex-post analysis was performed, which forms foundations of a diagnostic approach.

Various research methods were used in consecutive stages of the research process, ie. literature analysis, diagnostic surveys, individual in-depth interviews, case studies and participative observations.

The dissertation is based on both, primary and secondary sources. The theoretical part contains literature analysis, which constituted the base for forming research hypotheses. Further considerations regard results of literature analysis as the foundation for conceptual work. Empirical aspects are present in two chapters (ch. 2 and ch. 5). However, there are different goals, scopes and methods used in those chapters. The goal of ch. 2 was a diagnosis of the needs of academics in the context of assessment of e-learning activities. On the contrary, the goal of ch. 5 was to verify and evaluate the modified (adapted) integrated method of assessment of managing academic e-learning.

Consequently, the pragmatism paradigm guided the research approach. The mixed-method (complex and multi-stage) and heterogenous multi-method was applied. The results of ch. 2 are based on a triangulation of methods.

Quantitative and qualitative results of a diagnosis (ch. 2) were processed, analysed and graphically presented. For quantitative data, descriptive statistics and non-parametric significance tests (chi square, U Mann-Whitney), normality test (Shapiro-Wilk) and correlation coefficients (Pearson's r , Spearman's r_s) were applied.

In order to enrich the applicational dimension of the dissertation, the verification chapter (ch. 5) contains two cases:

- Warsaw University of Technology Distance Learning Centre – OKNO (ch. 5.1) and
- Paweł Włodkowic Academy in Płock Distance Learning Centre – SKO (ch. 5.2).

The nature of the dissertation is theoretical, cognitive, research and applied in the domain of social sciences, in the discipline of management and quality sciences (according to the classification of the Polish Ministry of Science and Higher Education). However, it also considers aspects from other disciplines of science. Therefore, a multidisciplinary approach was applied, considering achievements from such fields as economics, informatics, pedagogy, educational sciences and sociology.

The dissertation contains five essential and corresponding chapters, which are organized linearly in a way that reflects the chronology of the research activities.

The starting point of the dissertation, depicted in ch. 1, is theoretical analysis and considerations on e-learning in the light of knowledge-based economy. An analysis of theories and concepts of e-learning is presented, containing considerations on e-learning genesis, attributes, elements and factors influencing them. The chapter is built upon an analysis of issues related to the following (basic and corresponding) dimensions of e-learning: didactical, legal, technological and economical. The chapter is concluded with e-learning development directions and constraints considering technological development and related economical and socio-cultural changes.

The second chapter is empirical. Quantitative results of a diagnostic survey of e-learning in Polish universities were presented. Additionally, qualitative results of individual in-depth interviews focused on attitudes, opinions and needs of employees of Polish academic e-learning units considering assessment of e-learning units' effectiveness. Essential research presented in this part of the dissertation was divided into three stages grounded on the following research methods: free-targeted interview, diagnostic survey and individual in-depth interview. A Survey questionnaire was applied for quantitative research. It was divided into three parts: characteristics of a unit, didactics, technology. Qualitative stages were performed using interviews scenario with the list of desired data in the following areas: determinants of e-learning performance, the need for an assessment of e-learning effectiveness, the understanding of e-learning effectiveness and factors influencing it, the measures of e-learning effectiveness. The chapter is finalized with conclusions and recommendations for further conceptual and verification work.

The third chapter is a review of concepts, methods and tools, which could be applied for an assessment of academic e-learning. Literature analysis was performed and different approaches to an assessment of e-learning were discussed with a specific focus on effectiveness categories. The concepts of effectiveness and related categories (efficiency, efficacy) were analyzed from an economics and management sciences perspectives. A set of methods applied in an assessment of academic e-learning was also discussed. This discussion was presented from the perspective of a method used in assessments of higher education assessment, quality of educational services, e-learning trainings, and technology. The typology of assessment methods enabled formulation of directions for further research (conceptual and empirical).

The fourth chapter is theoretical and conceptual. The first part of it is a theoretical description of an integrated method of an assessment of effectiveness of techno-organizational

ventures (IMATOV)¹. The merit of IMATOV was presented, which is universality, holistic and sequential approach. The method is based on a construct: module – measure – measure's type. The scope and applicability of IMATOV was defined and compared with indicator-based methods of effectiveness assessment. The core of IMATOV is the dependency and description of eight related modules and phases (design, implementation, exploitation) of techno-organizational ventures. The second part of the fourth chapter contains the adaptation (modification) of IMATOV considering specifics and needs of effectiveness assessment from the perspective of academic e-learning. The modification of IMATOV is based on results of research presented in the previous chapters, in particular in ch. 2.4. Synthetic criteria and partial measures were presented and the way of measurement with calculation formulas were given. Then the aggregation and quantification procedure was proposed and tailored to the specifics of academic e-learning units.

The fifth chapter is focused on verification of the modified method for an assessment of effectiveness of academic-learning units presented in the previous chapter. Two cases were presented and discussed. The modified method was applied in two academic e-learning units, one from public university and one from non-public university. Those cases were based on participatory observation supplemented with in-depth interviews and an analysis of collected data. The final part of the fifth chapter is discussion on applicability, constraints, and development directions for the modified method.

The whole dissertation is finalized with the Conclusion section, where achieved results are summarized (after-effect for research goals), verification of hypotheses is summarized as well, and the potential transposition of results on management of educational units is discussed. Practical recommendations were also given in this section, with the focus on constraints and further research directions. The main hypothesis presented in the Introduction section has been positively verified.

The last part contains appendices, ie. the list of universities included in the research, details of research tools (questionnaires, etc.) and operationalization of analyses.

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G. Halczyk

¹ S. Marciniak: *Zespolona metoda oceny efektywnosci przedsiwzięć techniczno-organizacyjnych*. „Prace Naukowe Politechniki Warszawskiej: Organizacja i zarządzanie przemysłem” 1989, nr 4.