TRAINING IN ECONOMICS FOR ACQUIRING AND DEVELOPING BUSINESS INTELLIGENCE COMPETENCES AT HIGHER SCHOOLS

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Abstract

The research focuses on some relevant aspects of training at higher schools for building digital competences which facilitate the effective application of modern digital tools for solving planned tasks and achieving objectives. The emphasis falls on the necessary competences for working with integrated resource planning systems (ERP). Special attention is paid to the acquisition and development of the so-called Business Intelligence (BI) competences at higher schools.

At the beginning of the research, we have synthesized the necessary activities for quality training as the final objective is that the learners acquire a totality of knowledge, skills and experience for working and managing some heterogeneous in their nature processes, as well as some means and technologies required for the transformation of data into managerial information, whereas the data itself – into managerial decisions and action plans. The next stage consists of differentiation among the various types of skills – business skills, analytic skills and IT skills, as well as the specific aspects of their acquisition and development through the training at higher schools. The conclusion makes an assessment of the trends, respectively, the topics of training on specific tools for the solution of managerial tasks and the successful realization of strategic aims. We take into account the training in performing business analyses through dashboards and the work with key productivity indicators (KPI).

Parallel to this, we have researched the degree of coverage of this matter in existing curricula and courses at higher schools in Central and Eastern Europe using the method of random sampling without replacement.

The logic of carrying out the research corresponds to the principle that the training shall comply with the needs and requirements of the practice. The basis for determining the research sample is based on the subject matter of the research. We have encompassed enterprises of the private sector in countries from Central and Eastern Europe. The sample is limited to small, medium and large enterprises which actively use digital tools in making managerial decisions (respectively 16% / 65% / 19%) from the Czech Republic, Romania, Greece and Bulgaria using the method of random sampling without replacement. The methodology of the research secures its reliability by addressing the survey to a specific category of individuals, including the opinions of managers and employees on the digital competences of future specialists with a degree in Economics.

The results are used to make a narrow selection of those areas in the content of specific courses which shall be updated and to point out those curricula which shall be updated in the medium term.

Keywords: Training, higher schools, enterprise resource planning (ERP), competences, digital competences, BI competences.

1 INTRODUCTION

The digitalization of planned and managerial processes at the current stage of development of economic inter-relationships and relations outlines the numerous possibilities for gaining new competitive advantages. The most important engagement is the implementation of digital and ICT technologies in the existing business processes as it aims to optimize the activities and increase their efficiency by upgrading the use of digital data. The final aim is that this shall result in adding more value for the customers and consumers of the product or service, which also has a positive effect on the increased generation of personal income.

It has been empirically proven that the existing dynamic and highly competitive business conditions pose new challenges and recent problems to the management and the systems of corporate planning and management. The corporate, business, and functional strategies and the operative and tactical approaches and solutions concern the entire range of activities and processes at the enterprise, and they are relied upon for the securing of a higher degree of efficiency as well as for the achievement of the aims and priorities. To respond to this necessity, the concept of the ERP (Enterprise Resource Planning) system has been launched.

***The object* of research** in this article is Business Intelligence (BI) competences and their significance for the successful implementation of ERP systems. ***The subject* of research** is the problems of training in economics for the acquisition of BI competences. In the course of carrying out the research, we formulate the *thesis* that the efficient digitalization of the planned and managerial activities at enterprises requires that the process be based on the development of BI competences which, respectively, are acquired and improved most efficiently through training at higher schools of economics.

The aim is to visualize the key components of BI competences which are defining for increasing the efficiency of ERP and to pinpoint the priority trends for their acquisition within the training at higher schools with economic profile. To achieve this aim, we shall perform the following research *tasks*: conduct empirical research at enterprises selected on the basis of the method of random sampling without replacement; these enterprises have been implementing a wide range of digital solutions for improving planned activity; visualize the elements of BI competences and their structural configuration with the BICC - *Business Intelligence Competency Centers*; study the implemented traditional and innovative methods of training for the acquisition and development of such type of competences in higher schools of economics and pinpoint specific measures for the improvement of this process.

2 LITERATURE REVIEW

The problems of the implementation of digital solutions for facilitating planned and managerial activity and, in particular, the integration in the process of training at the higher schools of the necessary competences for working with them in the conditions of intensive business challenges have been discussed in works by various authors (B. Borisov, L. Kraev, D. Stefanova, M. Orekhov, M. Alexandrova, G. Chipriyanova, M. Chipriyanov, V. Blazheva, G. Georgiev, V. Georgieva, G. Vakharia, A. Gupta, P. Saporito, L. Scheierman, etc.); they have been presented at scientific forums and meetings; nevertheless, no complete scientific research has been conducted on them. All ideas and conclusions expressed in those works establish the basis for the completion of the established tasks of this research.

3 RESEARCH METHODOLOGY

The base for determining the research sample is formed on the basis of the problematic research framework. It encompasses enterprises in the private sector from countries in Central and Eastern Europe. The sample has been limited to small, medium, and large enterprises (respectively, 16% / 65% / 19%) from the Czech Republic, Romania, Greece and Bulgaria. These are 75 business enterprises and 143 respondents. The plausibility of the sample is related to the degree of truthfulness of the gathered information, i.e., to what extent the measurements or the responses of the researched individuals are truthful. The methodology of the research secures the plausibility by addressing the survey to such a category of individuals which involves the opinions of managers and specific employees – specialists.

The research has been carried out through electronic surveying. The standardized survey involves a specially designed questionnaire with precisely defined questions and response modalities. The questions initiate the respondents' statements regarding the problem-based research framework.

The questionnaire is adjusted so that it meets the requirements of the research. It comprises a total of 9 sequences of questions: Sequence 1: Managerial policy; Sequence 2: Organizational goals; Sequence 3: Implemented digital applications; Sequence 4: Employees' motivation; Sequence 5: Possibilities for improvement; Sequence 6: Action plans; Sequence 7: Analysis of the results; Sequence 8: Taking corrective

actions; Sequence 9: Organizational development.

The processing of the received data has been carried out through the application of statistical procedures. We have used the *surveyplanet.com* application for the administration of the survey.

4 RESULTS AND DISCUSSION

The received results regarding the type of the used software show that 42% of the researched business enterprises use in their activity systems with base functionalities and specialized program products, whereas 58% have implemented varieties of integrated resource planning and management systems.

The summarized results of our applied research allow us to outline the leading dimensions of digitalization and implementation of information and communication technologies (ICT) for the purposes of the planned and managerial activity in business enterprises. We will do this on two planes:

- **Firstly**, in a narrower sense, using specialized program product with planned focus;
- **Secondly**, in a wider range, implementing a complete resource planning and management system (ERP), with which all business processes shall be integrated.

The research of the specialized program products with planned focus reveals that the market is populated with an extremely wide range of software products and applications such as LivePlan, BizPlan Builder, Business Plan Pro, Plan Write, Plan Magic, Business PlanMarker, Enloop, Iplanner, Ultimate Business Planner, Balanced Scorecard or Strategy Planning Software BSc Designer, QuickScore, BOARD, BSPG, etc. The comparative analysis of their characteristics shows a relatively high level of coverage regarding their functional range, which enables us to define them as standard. Their common characteristics are limited to: (Borisov, 2017) presenting the stages in the preparation of planned documents; providing templates of planned documents and specific shapes of tables, forms, and applications; ready algorithms for solving planned assignments; complete software products and applications for preparing business plans and other planned documents; web-based solutions for creating planned documents; Cloud-based service for the preparation of planned documents (Borisov, New Paradigms in Planning, 2020).

The range of a well-functioning digital system of planning which integrates strategic and business planning based on a modern software product shall be developed in fields such as strategic analysis, goal setting, business planning, which, respectively, shall be further elaborated in a wide range of functionalities (Georgiev & Georgieva), (Georgiev & Georgieva). This draws our attention to the second leading plane, which is related to the development of integrated systems of the ERP type.

4.1 Integrated Systems of Resource Planning and Management – Relevant Aspects

Tuition ERP is a totality of: Integrating and sharing of data; General rules for resource management; Complete information connection of the business processes with those of partner enterprises; Quick reaction depending on the dynamics of the environment; Continuous information connectivity of the involved specialists, etc. This concept is based on the general database and the corresponding modular software. It allows each separate functional unit to generate and use information in real time. ERP is a factor for full integration of the business functions.

ERP may be defined as a systematized totality of technical, program, technological and information means combined with modern managerial methods, techniques and technologies supported by the competences of specialists and managers; thus, the enterprise's management is carried out on a rational and efficient basis from production-technological and financial-economic positions. … The high degree of automatization is intended for management support at various levels – operative, tactical, and strategic (Vakharia, 2005).

The results of the research of the most important characteristics of such an integrated system completely coincide with other such research (Bulgaria's ERP systems market: right at the beginning and one step from the fierce competition, 19-25 April 2004). It turns out that to work efficiently, ERP shall possess significant characteristics such as: flexibility, to be able to adapt to the dynamically changing characteristics of the organization itself, but also of the business environment (93% of the respondents); modularity and openness – the modules shall be able to operate independently of one another with the option to be based on various hardware platforms (89%); comprehensiveness – integration of data which shall allow the formation of both general and detailed picture of each of the strategic trends (78%); relevance – it shall correspond to the best business practices and solutions as well as conform to the latest achievements in the field of ICT (63%).

ERP integrate the processes and activities at the enterprise on a modular basis. There are also software products which are narrowly focused on a specific field such as customers (CRM), supplies (SCM) and human resources (HRMS). They are characterized as follows (see Fig. 1): (Todorov, 2021), (Integrated

Management Systems, 2020).

The established practice is that a selection has to be made and modules – which correspond to the largest extent to the prescribed requirements and needs in this particular case – shall be integrated. This is also a constant process of continual updating and improvement according to the existing and future corporate, business and functional strategies. Basically, ERP may encompass around ten functional trends such as: Customers; Suppliers; Life cycle; Production; Human resource management; Long-term assets; Cost price; Projects and investments; Accounting services and financial management; Business analysis and decision making (Chipriyanov & Chipriyanova, 2021), (Chipriyanov, M., 2009).

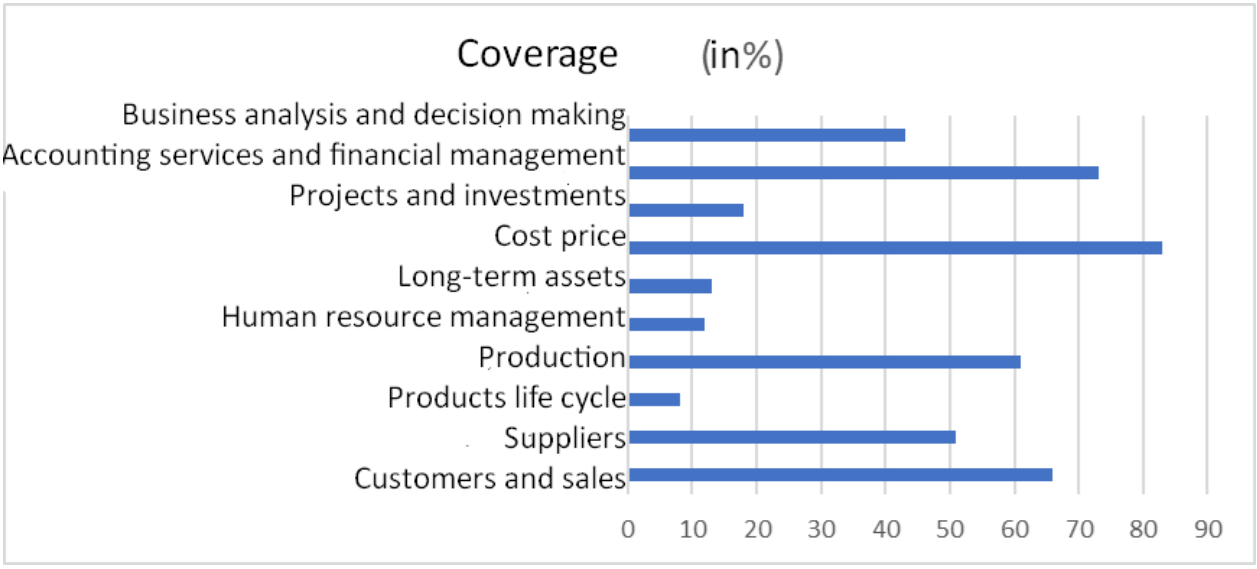

Fig. 1. The most often used ERP modules

(Source: authors' own research)

Under the contemporary conditions, the ERP systems allow the optimization of the various types of resources and the increase of productivity. They significantly relieve the process of making operative decisions. They improve the mechanisms of managerial control on the target (planned) performance indicators.

4.2 Building Business Intelligence (BI) competences as the aim of training

The results of our applied research show that one of the most critical factors which could hamper the efficient integration and implementation of ERP is the risk related to the lack of the necessary for this purpose competences. The risk that has been pointed out is expressed mainly in the two planes and is confirmed by other scholars as well (Potential Errors in the Implementation of an ERP system and how they could be avoided, 2017), (Alexandrova, 2021). ***In the first place***, we can point out the lack of competences and experience of the team engaged in the implementation of ERP. ***In the second place***, we can outline the lack of competences acquired as a result of training and insufficient personnel at the enterprise – the user of the system. In either case, the acquisition of technical competences through training is only a small portion of what is necessary – what is also needed is organizational competences for reengineering the business processes in a way that does not threaten the integration and the normal functioning of the business enterprise – user.

Our analysis shows that the option which has the highest potential for overcoming the established problem is related to the possibilities of training at higher schools of economics. The creation of competences for operating with ERP involves psychological, theoretical, and practical preparation for the acquisition of specific knowledge, skills, and capabilities by the enterprise's employees for the changes which stem from the implementation of the system (How to prepare and train the personnel in implementing ERP systems, 2020).

The existing practice is that the main course for working with the system shall be elaborated in two planes – for key users and for end users (Stefanova, 2012). The key users are in fact the functional managers at an enterprise. Their training starts at the beginning of the project of the implementation and aims to introduce the team of key employees to the possibilities of the software system and the interrelations among the separate functional spheres and business units. The end users usually occupy the lower hierarchical levels,

and their training is carried out only when the ERP has already been adjusted to the specific characteristics of the activity and there can be real testing of the various functionalities.

The term competences for ERP does not refer to such an extent to the possession of digital competence for working with the system, but rather to the possession of competences for "managing the business". Therefore, the process of building competences for working with the system shall focus on the economy, administration, and management of business activities (Dochev, Chipriyanova, & Georgieva, 2014). The most significant competences are those in corporate management, business planning, business logistics, management of the commercial activity and financial management (Blazheva, 2016), (Blazheva, 2008).

A new term appears – ***Business Intelligence (BI) competences***. It encompasses knowledge, skills, abilities, experience, unique capability to turn "raw" databases into "meaningful" managerial information and solutions directed towards increasing the efficiency of the processes for the development and functioning of enterprises.

BI competences are a totality of knowledge, skills, experience in working and managing diverse in their essence processes, means and technologies necessary for the transformation of data into managerial information, whereas the information itself – into managerial decisions and plans which require taking quick and efficient business actions. BI competences are limited to: (Business Intelligence Solutions – What, for Whom and Why, 2019) Active support in the formulation of efficient and informed solutions; Transformation of a large volume of information into precious content for the business; Facilitating the accessibility, the exchange, the processing and analysis of information; Creation and storage of new knowledge at the business enterprise; Minimization of the expending of time and resources. In another more detailed dissection, BI competences find expression in: (Pizhev, 2017) technical knowledge in SQL and other BI tools and platforms such as Tableau, OBIEE and BOBJ; extraction, processing and analysis of data from diverse sources and managerial systems; skills for carrying out comparative, prescribing and predictive analysis; ability to synthesize data and its presentation through visualization tables, metrics and reports; creation and support of databases; abilities to synthesize models and variations; abilities for practical use of Agile and/or Lean methodologies; possessing excellent communication skills.

Over the last years, the emphasis has fallen on the "business intelligence and the initiative for management of the efficiency". This can happen by following the path of organizational change as, for instance, moving key business analyzers from functional to corporate role as part of the center for BI competences (Business Intelligence Competency Center – BICC). This can also happen by following the path of technical change or cultural change concerning the means by which the enterprise makes decisions and manages performance (Gupta, 2017).

Figure 2 visually explains the significance of the creation of a business intelligence competence center (BICC), equipped with personnel that has the right ***business skills*** (Business Skills), ***analytic skills*** (Analytic Skills) and ***technical skills*** (IT Skills) to support the BI processes (Saporito, 2013), (Scheierman, 2017).

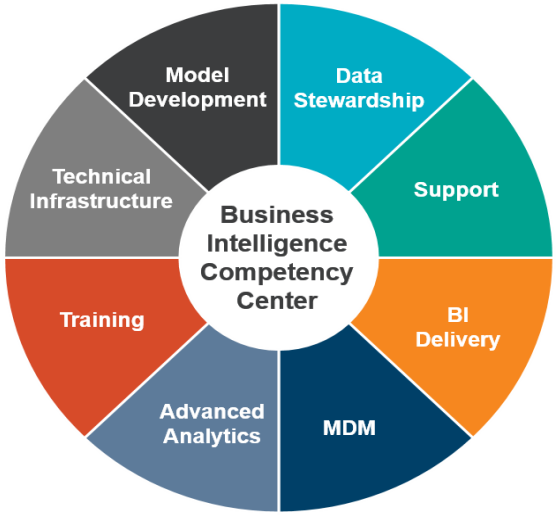

Fig. 2. Elements of BICC.

(Source: Business Intelligence Competency Centers Overview and Guide, https://info.knowledgeleader.com/business-intelligence-competency-centers-overview-and-guide)

Figure 3 shows the assessment of the significance (in %) of the separate competences for the successful organization and the efficient functioning of BICC.

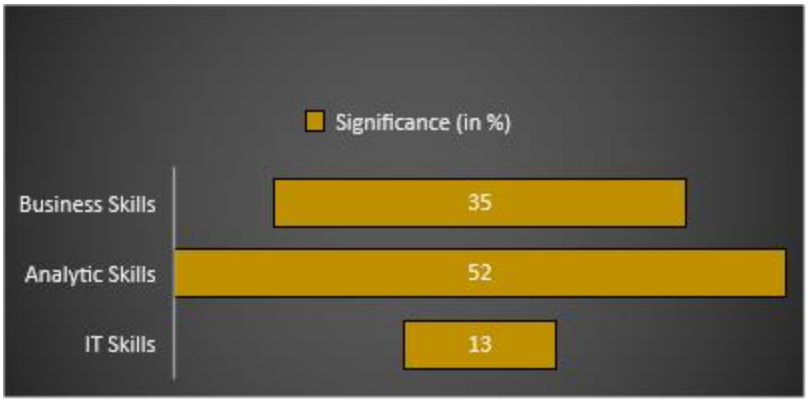

Fig. 3. Significance of the various competences for the success of BICC

(Source: authors' own research)

Within BICC there are numerous organizational roles as well. Depending on the specific needs of the business, these roles can be performed by employees who possess all three sets of skills, respectively competences presented in the figure above. The four obligatory organizational roles are (Point, 2021):

• ***BICC Leader***. This person is responsible for daily BICC operations and is directly responsible to the senior managerial team. This person shall be able to present "compelling" representative information to designated users regarding the benefits of BI.

• ***Business Analyst***. This person follows all business and analytical knowledge available to BICC. This role requires a combination of strong business and analytical skills and experience. It serves as a connection between functional experts, on the one hand, and analytical and business experts, on the other.

• ***Technical Advisor***. The is the leading IT representative in BICC. The key competences that this person shall possess are: experience with BI systems, data warehouse architecture and software development.

• ***Data Steward***. This person is responsible for the maintenance of the information about business processes, including overseeing the data models and quality. This person shall also follow and make corrections to the information when necessary and manages the data model.

It is important that BICC is not provided with personnel and experts on the basis of employees "borrowed" from other business units.

4.3 Tools for Business Intelligence (BI) Solutions – an Important Emphasis in Training

In this part of the paper, we will present the set of tools for BI solutions which is most actively used; this is visible in the results of our research. 34% of the researched enterprises point out that they implement business analyses through dashboards: see fig. 2. The information in the dashboards is interactive and upon selecting a certain element (for instance, specific customer), the rest of the information on the dashboard (data about items, warehouses, graphs, total amounts, etc.) is automatically filtered depending on the element selected by the user (Experience interactive dashboards, 2022).

Fig. 4. BI center / menu Dashboards / Sales (general view).

(Source: Experience interactive dashboards, https://www.idashboards.com/dashboard-examples/)

Usually, users have at their disposal a dashboard designer that facilitates the change of the displayed data, graphs, and tools. The system offers a wide range of visual elements such as tables, graphs, devices, geographical maps, etc.[1]

Key Performance Indicators (KPI) are another critical component of the BI module. In 41% of the enterprises, they play a significant role as a system of formulating goals and tracking their achievement. In practice, these are quantitively measurable indicators. They have been individually selected depending on the specific aspects of the corresponding activity. They are intended to measure the degree of progress towards important short-term and long-term business goals. Last but not least, they are instrumental in formulating the enterprise's corporate strategy (What are the KPIS for your Business?, 2018), (Babanin, 2020).

The significance of using KPI, respectively, the integration of this functionality in ERP, is to track down the relation "formulation of goals – achievement of goals". Every leading goal is transformed into a key efficiency indicator, i.e., performance indicator. Then, it is decomposed to its pre-determined components. For instance, the defined goal of income from sales for a specific period is decomposed to sellers/distributors. On this basis, at a certain stage, ERP indicates the degree of achievement. In addition, we can also calculate forecast values of the indicator for a future period.

The integration of KPI in ERP in the above mentioned way has the capacity to connect BI solutions not only with the operatively tactical, but also with the strategic managerial decisions. This again poses the question of the competences of the engaged personnel, the competences for activity data analysis, for benchmarking, for synthesis of new business models, etc. (K. Mertins, 2012), (Chipriyanov, 2008).

The most often used efficiency indicators can be related to the group of financial ones: net income from sales. Profit, number of customers, number of sales per day and average amount per sale. For the purposes of operative management, a set of non-financial indicators have been developed: average time for the realization of an order, customer satisfaction index, average time of logistic service per customer, etc. (Information Quotient Software Services Pvt Ltd - Accounts Payable Analysis, 2020), (The Top Manufacturing KPIs Youre ERP Software Should Track, 2022).

4.4 Benchmarking Research of the Training Documentation and Content

Parallel to the research of the requirements of the business and the best practices in the real economic life, we have carried out benchmarking research of the best practices for the development of BI competences

[1] Upon the initial implementation, each customer receives nine types of preset business analysis dashboards in the field of Project Management, Finance, Operations Management, Manufacturing, Marketing, Transportation & Logistics, Retail, Human Resources, etc.

through training covered in the existing training documentation and content at higher schools in Central and Eastern Europe.

The comparative assessment of the training programs of various courses in the field of digitalization of the managerial activity with a priority to working with ERP systems shows that there are a number of topics, which are considered "classic", but there are also such that can be defined as "creating deficit" based on their comparison to the needs of the practice. The specific results are shown in Table 1.

Table 1. Thematic focus of the training courses in managerial digital tools at the higher schools of economics in Central and Eastern Europe

Topics	Coverage (in %)
Base characteristics of high-class software	100
Popular ERP concepts	98
Initial installation and settings	90
Popular modules	92
Training of the engaged personnel/users	**63**
Document generation	95
Statistics	77
Network/teamwork technology	73
Mobile applications	61
Upgrade possibilities	88
Business strategy development	**48**
Factors for the acceleration of business development through ERP	**52**
Access management	38
Working with an online store	65
Possibilities for joint implementation of databases	66
Cloud services and mobile access	62
Specific aspects of ERP in various industries	70
Others	…

The data reveals the insufficient coverage in the training content of similar courses in topics such as "Training of Engaged Users of the System", "Business Strategies Development", "Factors for Acceleration of Business Development", etc., which are of uppermost significance for building BI competences. These hidden deficits shall be eliminated/compensated as quickly as possible in the interest of the learners at higher schools of economics. The formal reason for starting/restarting this process can be organized benchmarking meetings with representatives of various main training units at the higher schools and specialists from the practice.

The ***benchmarking meetings*** are a means of exchange of experience among the various types of organizations (higher schools and business organizations) and identification of good practices which shall be tested and applied in the process of training for the acquisition of BI competences. They aim at outlining measures for increasing the capacity and motivation of leading lecturers and creating a more efficient environment for research and adaptation of the achievements in the field and their gradual inclusion in the training content; this shall lead to increasing the professionalism in this field and to a better approach of working with the trained students.

5 CONCLUSION

One of the leading trends in the digitalization and implementation of ICT solutions in business process management concerns the implementation of a whole resource management and planning system at the enterprise (ERP); it shall facilitate the achievement of a complete integration of business operations. The key moment is the possession of competences for working with the presented digital and ICT tools by the leading specialists. Some of the most significant competences among them are the BI competences which comprise special knowledge, skills, capabilities, and experience for analyzing and forecasting the dynamics of business processes at the enterprise on the basis of data gathered from its activity. They are a key tool for receiving a maximum useful value of this information by its processing, extracting, and systematizing by key productivity indicators (KPI). The possession of BI competences creates conditions for the establishment of regularities and cause-effect relations and for synthesizing the development models.

The results of our research show that the training in economics at higher schools is of uppermost significance for building and developing BI competences. At the same time, the data reveals the necessity of

updating the training documentation on the applicable courses and the corresponding of learning content resulting from the discovered deficit of content on certain topics of key importance for the acquisition of BI competences. An appropriate tool for initiating changes in this field could be the organization of benchmarking meetings, which are a tool for the exchange of experience among the various types of organizations (higher schools and business organizations) and the identification of good practices which shall be tested and applied in the process of training and acquisition of BI competences. We believe that in this way the training process in economics at higher schools would stimulate future specialists in their future work on the preparation of reports, references or visualization techniques, helping managers of various managerial levels see the changes in the business processes in their dynamic dissection. They will also be able to develop and implement quick, precise, and adequate solutions towards the achievement of the goals, the realization of business benefits and/or the regulation of low-productivity activities.

REFERENCE LIST

Alexandrova, M. (1 September 2021). Risks in the Implementation of ERP-systems at Bulgarian Economic Enterprises. Retrieved from https://balbg.com: https://balbg.com/publications/Matilda%20Aleksandrova/Riskove%20pri%20vnedriavane%20na%20ERP.doc

Babanin, V. (4 December 2020). What are the KPIS for your Business? Retrieved from https://forbesbulgaria.com/2020/12/04/%D0%BA%D0%BE%D0%B8-%D1%81%D0%B0-%D0%BA%D0%BB%D1%8E%D1%87%D0%BE%D0%B2%D0%B8%D1%82%D0%B5-%D0%B8%D0%BD%D0%B4%D0%B8%D0%BA%D0%B0%D1%82%D0%BE%D1%80%D0%B8-%D0%B7%D0%B0-%D0%BF%D1%80%D0%B5%D0%B4%D1%81%D1%82/

Blazheva, V. (2008). Higher Education and the Business in Partnership in the Training of the Students in the Major of Agricultural Economy. Veliko Tarnovo: Abagar.

Blazheva, V. (2016). Management of Agricultural Economies in the Training of Students in Economics. In Scientific Research Almanac (pp. 446-469). Svishtov: Tsenov Publishing.

Borisov, B. (2017). Innovative Approach in Developing Business Plans through Web- and Cloud-based Software Solutions. International scientific conference. High technologies. Business. Society. (pp. 183-186). Borovets: Sofia: Scientifical Union of Mechanical Engineering.

Borisov, B. (2020). New Paragigms in Planning. Ruse: Profi Print.

Bulgaria's ERP Systems Market: Right at the Beginning and One Step from the Fierce Competition. (19-25 April 2004). SAGA technology, 5-7.

Business Intelligence Solutions – What, for Whom and Why. (30 January 2019). Retrieved from https://www.balkanservices.com/: https://www.balkanservices.com/blog/business-intelligence-reshenia-kak-kakvo-za-kogo-i-zashto/

Chipriyanov, M. (2009). Corporate Planning. V. Tarnovo: Abagar.

Chipriyanov, M. (2008). Methods of Strategic Research and Solutions. V. Tarnovo: Abagar.

Chipriyanov, M., & Chipriyanova, G. (2021). Key factors for successful digitalization of accounting training. New Knowledge. Science magazine, Vol 10, No 1, pp. 22-31.

Dochev, M., Chipriyanova, G., & Georgieva, G. (2014). Possibilities for Building an Integrated Accounting System in the Practice of Enterprises. Scientific Research Almanac. D. A. Tsenov Academy of Economics - Svishtov, issue 21, pp. 148-176.

Experience interactive dashboards. (31 January 2022). Retrieved from https://www.idashboards.com/dashboard-examples/

Georgiev, G., & Georgieva, V. (n.d.). Challenges and Problems in Contemporary Economic Forecasts. Proceedings of the International scientific and practical conference "Bulgaria of regions'2019 (Vol. 2). Plovdiv: http://science.uard.bg/index.php/regions/article/view/641.

Georgiev, G., & Georgieva, V. (n.d.). Contemporary Trends in the Methods for Financial Planning. Proceedings of the International scientific and practical conference "Bulgaria of regions'2019 (Vol. 2). Plovdiv: http://science.uard.bg/index.php/regions/article/view/640.

Gupta, A. (2017). Business Intelligence: Concepts, Components Tools, Techniques, Benefits and Challenges. Retrieved from http://ijariie.com/AdminUploadPdf/BUSINESS_INTELLIGENCE__CONCEPTS__COMPONENTS_TOOLS__TECHNIQUES__BENEFITS_AND_CHALLENGES_ijariie5711.pdf

How the prepare and train the personnel in implementing ERP systems. (16 December 2020). Retrieved from https://www.dataplus-bg.com: https://www.dataplus-bg.com/kak-da-podgotvim-i-obuchim-personala-pri-vnedryavane-na-erp-sistemi/

Information Quotient Software Services Pvt Ltd - Accounts Payable Analysis. (30 January 2020). Retrieved from https://powerbi.microsoft.com/it-it/partner-showcase/information-quotient-software-services-pvt-ltd-accounts-payable-analysis/

Integrated Management Systems. (21 May 2020). Retrieved from http://www1.ecs.ru.acad.bg: http://www1.ecs.ru.acad.bg/fbm/uis_b/L-10.pd

K. Mertins, H. K. (24 February 2012). Benchmarking-Techniken. Retrieved from http://www.innovation-aktuell.de/kl0322.htm

New BI Center (System for Business Analyses through Dashboards), (13 December 2021). Retrieved from https://zeron.bg/bg/novini/nov-bi-centyr-sistema-za-biznes-analizi-chrez-tabla-dashboard-24.html

Orekhov, M. (1/2020). The Essence of the Digitalization Process as a New Global Informatization Stage. Business Management, 75-95.

Pizhev, D. (7 April 2017). Profession: BI Specialist. Retrieved from https://www.karieri.bg: https://www.karieri.bg/news/36558_profesiia_bi_specialist

Point, B. (10 December 2021). From the data center to the competency center: Business intelligence in transition. Retrieved from Management and Technology Consultants: https://www.bearingpoint.com/files/BENO11106_BICC.pdf

Potential Errors in the Implementation of an ERP system and how they could be avoided. (22 May 2017). Retrieved from http://www.antipodes.bg/bg/about/news-events/

Saporito, P. (12 August 2013). Business Intelligence Competency Center, the Glue that Hold Business and Technology Together. Retrieved from https://blogs.sap.com: https://blogs.sap.com/2013/07/12/business-intelligence-competency-center-the-glue-that-hold-business-and-technology-together/

Scheierman, L. (29 June 2017). Business Intelligence Competency Centers Overview and Guide. Retrieved from https://info.knowledgeleader.com/business-intelligence-competency-centers-overview-and-guide)

Stefanova, D. (7 May 2012). Training Gives Meaning to the Infvestment in ERP. Retrieved from https://enterprise.bg: https://enterprise.bg/blog-news/o%D0%B1%D1%83%D1%87%D0%B5%D0%BD%D0%B8%D0%B5%D1%82%D0%BE-%D0%BE%D1%81%D0%BC%D0%B8%D1%81%D0%BB%D1%8F-%D0%B8%D0%BD%D0%B2%D0%B5%D1%81%D1%82%D0%B8%D1%86%D0%B8%D1%8F%D1%82%D0%B0-%D0%B2-erp

The Top Manufacturing KPIs Your ERP Software Should Track . (21 January 2022). Retrieved from https://www.selecthub.com/enterprise-resource-planning/manufacturing-kpis-erp-software/

Vakharia, G. (2005). ERP Strategy. Jaico Publishing House.

What are the KPIS for your Business? (19 September 2018). Retrieved from https://www.travel-b2b.com/blog/view?nwid=8