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ABSTRACT

on the dissertation work

THE ROLE OF DUAL TRAINING FOR THE IMPLEMENTATION OF HUMAN RESOURCES MANAGEMENT POLICIES IN THE ORGANIZATION

For obtaining the educational and scientific degree "Doctor" in professional field 3.7. Administration and management

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I. GENERAL CHARACTERISTICS OF THE DISSERTATION

Relevance and significance of the research

The dual system aims to improve the quality of vocational education and training, and hence the workforce, by providing opportunities to develop professional skills in line with the needs of the labor market, as well as to facilitate the transition from education to employment. It provides an opportunity for successful implementation on the labor market, for supporting and promoting the building of stable partnerships between educational institutions and businesses, for increasing the incentives for students to participate in additional practical training in a real working environment. Some specific soft skills are essential for success in the workplace and include communication, teamwork, problem solving and time management. These skills are often difficult to teach in the classroom, but can be developed through practical experience in a company. Combining theoretical learning with on-the-job experience provides learners with the opportunity to develop and practice these important skills in a real-world environment. Dual training helps to update both the curricula as a whole and the taught disciplines, courses and topics according to the

needs of the business, to help employers to select persons who have proven skills in the training process and for their immediate inclusion in employment.

The dual system has proven itself in the most developed economies of Europe as a key tool for providing qualified specialists who directly start work from the training institution and contribute to the growth of the economy and high youth employment. In this system, the leading partner of schools is the private sector, which not only invests in its future personnel, but also shares the responsibility for the quality of professional training.

Investigating the relationship between the organization of dual training and the implementation of human resource management (HRM) policies in the organization can contribute to its more effective implementation at a systemic level. Dual training programs can help address the skills gap that many employers face by providing learners with the specific competencies that are needed in the industry. By investing in the training and development of their employees, employers can ensure they have a skilled and capable workforce that can help drive business growth and success. In addition, dual training can also help improve employee retention by providing workers with career growth and development paths.

In the course of summarizing the results of the present study, the Ministry of Education and Science announced the pilot introduction of dual education in the higher education system. To some extent, the results of the dissertation research presented in this text could be useful for this new initiative.

The interest in the topic is also born from the experience of the author, who combines 17 years of work experience as an expert in human resources management and 7 years as an expert in professional qualifications. The search for good practices that can be adapted and used in a national context is both of personal interest to the author and the subject of a significant amount of research.

Object and subject of the study

The object of research in this dissertation is the dual education model in Bulgaria, which includes the following elements:

- The normative framework for implementing a dual form of education
- Businesses small, medium and large enterprises from various economic sectors that have participated, are participating or are interested in being included as partners in the dual education system

- The educational institutions that participate as partners in the dual education system
- The direct participants in the realization of a dual form of training trainees and their mentors in the companies.

The subject of the study is the possibilities of implementing human resource management policies in the organization by applying the dual system. The research task includes studying the possibilities of adapting some of the measures introduced in the European Union to promote the effective implementation of dual education.

Purpose and tasks of the study

The purpose of the study is to analyze the state of the dual system in Bulgaria based on the theoretical concepts in the field of training and human resources management and, based on the conclusions and generalizations of the analysis, to reveal the possibilities for an improved model to be applied in the future.

The following tasks of the dissertation research derive from the goal:

- To clarify the practical utility of the dual system for all stakeholders
- To systematize good international practices in the implementation of dual education
- To analyze the state of the dual system in Bulgaria
- To analyze the role of dual training for the implementation of human resource management policies in the organization
- To investigate the possibilities and limitations for a wider application of the model in our country
- To formulate recommendations of a scientific and applied nature, aimed at improving the regulatory framework regulating the dual form of education
- To develop specific proposals to promote the dual training system in organizations of different sizes from a wide range of business sectors

Research questions

The research thesis of the dissertation can be formulated as follows: through the dual training system, some of the challenges related to the management of human resources in the organization can be solved - recruitment and selection of personnel, ensuring continuity and career development, staff motivation. This, in turn, requires the identification of specific measures to support all participants in dual training partnerships as a prerequisite for promoting its wider application and increasing benefits at organizational and sectoral level.

The set of research tools used seeks answers to the research questions posed:

- 1. What is the potential of the dual system to support the implementation of HRM policies in the organization?
- 2. Does the current way of implementing dual education in the country reveal this potential?

The research is based on the systemic approach regarding the consideration of the main problem from the point of view of all stakeholders in the process – employers, training institutions, the state and individuals in their role as learners.

Research methodology

The main stages through which the dissertation research goes are:

- Analysis of the regulatory framework for implementing partnerships for dual education in Bulgaria
- Comparative overview of dual system practices abroad
- Analysis of the possibilities of linking the dual system with specific human resource management policies in the organization
- Conducting structured interviews with a target group of participants in the dual system in our country - director of a training institution, head of an enterprise, HR expert in a company, mentor of trainees, expert in professional qualification and trainer of mentors
- Conducting a short pilot study with a target group of participants in the dual system in the country
- Organizing and conducting a detailed survey to investigate the application of dual training as part of the organization's human resource management policies

- Validation of the collected data in two focus groups
- Analysis of information and formulation of conclusions and recommendations.

Depending on the context and available information, the main conclusions and generalizations are made based on the inductive and deductive method. Qualitative and quantitative research methods are combined - the qualitative ones include desk research, expert evaluation and conducting two different focus groups, and the quantitative ones - online surveys among different target groups.

Empirical data were collected in 2023 via a questionnaire. The questionnaire was distributed through an online tool (Limesurvey).

Results and applicability

The diagnosis of the model of the dual education system in Bulgaria and the results obtained from the analysis of the empirical information lead to the derivation of recommendations for its improvement. They are oriented towards updating the regulations, introducing career guidance in the school system and supporting companies with tools for more effective implementation of the dual form. The focus of the dissertation is human resource management policies. Therefore, to adapt and complement the personnel planning policies, job analysis and design, a model has been created that can be applied by companies that participate in the dual system. Recommendations of a scientific and applied nature are defined as areas for future change in the implementation of the dual training model:

- Introduction of incentive measures for partner companies in dual training
- Supplementing the toolkit for HRM in enterprises with a mechanism for assessing positions suitable for practical training in a real workplace
- Updating of the normative documents related to the organization and conduct of the dual form
- Designation of a new element in the dual system for students introduction of mandatory professional diagnostics and professional guidance before inclusion in a dual form

Based on the experience gained, steps can be taken for regulatory changes to encourage wider implementation of the model and beyond the framework of a specific project. The dynamics of the labor market and the pace of transformation in the business world make it necessary to consider the development of a comprehensive concept for the introduction of the dual training system in all educational institutions and for different target groups (students, adults, unemployed,

migrants, etc.). However, this requires precise coordination between all participants in the process and the resolution of a number of identified challenges.

If we are talking about transforming the dual education system in order to improve its efficiency, a more serious involvement of business as a stakeholder in the process is necessary. This could be done through a large-scale information campaign about the benefits of dual training among employers, introducing additional incentives such as tax breaks, providing support for the introduction of the model and implementing quality assurance measures. Based on the results, it can be concluded that a broad explanatory campaign is also needed among parents, introduction of career guidance for students and deployment of the dual system among adult learners.

Applicability of the results. The comparative review of foreign models for conducting a dual form of education serves as a solid basis for formulating specific recommendations for the implementation of the dual system in the country. The research is guided by the identified good practices in the countries studied and contributes to the identification of additional dimensions and aspects of the relationship between dual training and human resource management policies in the organization.

The practical applicability of the results can be sought in several directions.

First, on the basis of the collected data, we can conclude that one of the missing elements in the dual system in our country is the professional diagnosis, which precedes the professional orientation before the choice to participate in dual education.

Next, the introduction of a mechanism for tracking the realization of dual-form graduates would contribute to measuring the employability of young people and to the assessment of the return on investments made by the state and companies.

In sync with the subject of the research, emphasis is placed on the possibility of supporting HRM policies through the dual system. The conducted studies have identified a number of challenges in its implementation, for some of which we offer as a possible solution a model of a mechanism for determining positions suitable for a dual form of training in the organization.

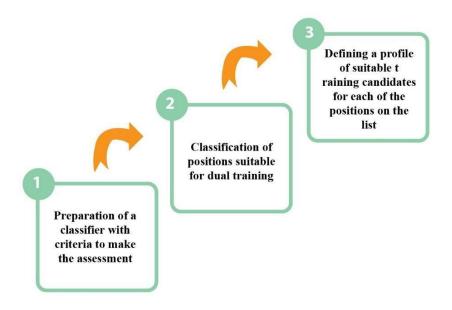


Fig. 1 Model of mechanism for determining positions suitable for dual training

The proposed mechanism can be supported by a methodological guideline for the evaluation of positions suitable for dual training with a description of the stages of the process. A methodological guideline for assessing the appropriate positions for inclusion in the dual system is proposed in Appendix 3 to the dissertation. The mechanism can be laid down as part of job analysis and design policies for enterprises participating in or wanting to start a partnership in the dual system. With the help of the methodological instruction, the first step in the direction of introducing the dual form in a company without experience can be taken.

In addition to the activity of employers, it is important to measure and evaluate the quality of the practical training offered. The most accurate measure we offer is the employability of dualform graduates.

An employability assessment model could be based on a set of important elements, the absence of any one of which would significantly affect the final overall assessment of the individual. The proposed employability analysis and assessment model is illustrated in Fig. 2.

ASSESSMENT COMPONENTS

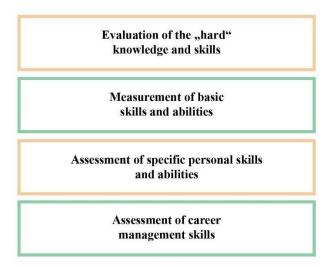


Fig. 2 A model for assessing the employability of dual training graduates

The model includes a complex of so-called "hard skills", core skills, abilities, specific personal skills, abilities and career management skills. The first group includes specific theoretical and practical knowledge in the field of the chosen profession and sector, as well as language and digital skills, etc. They are the basis of the model, are directly related to the training programs in the dual form and can be relatively easily evaluated by the employer. Key skills include adaptability, teamwork skills and communication skills, working with data, analytical skills and logical thinking. The third group consists of social skills, emotional intelligence, motivation, conflict management skills, stress management, decision making. Career management skills, in turn, include the ability to learn, self-control, confidence, planning and priority management skills, positive work attitude, presentation skills, etc. The model can serve as a foundation for

developing a toolkit for assessing the employability of young people completing dual education (and even those who are in the process of education). The model is applicable both to the trainees themselves, if they want to identify future areas of development, and to the human resource management experts in the companies that provide workplaces for practical training. It can also serve "the investors" who finance the dual form of education - the Ministry of education and science and other institutions providing funding mechanisms.

The results of this study also outline some directions for future research to enable the wide application of dual education at all levels of the education system.

One direction would require testing the proposed model for assessing the appropriate jobs for which to offer practical training. An assessment at the level of organizations would allow the identification of problem areas related to the preparation of a company for inclusion as a partner in the dual training model.

A second direction would seek to track the realization of dual-form graduates, as well as use the data from such an analysis in a campaign to increase the attractiveness of dual education. Long-term observations can allow further validation of the benefits and effects for the organization of the implementation of dual training as part of the human resources management and development policy.

A third direction would look for the construction of flexible study paths that would promote the transition from dual training in the youth vocational education system to a dual form in the higher education system. Research on the impact of on-the-job training in higher education is still quite limited (Lester and Costley 2010). Such an approach would help to limit the refusal of young dual graduates to continue their career in the chosen professional field due to a desire to continue studying at a further degree.

A fourth topic would be to consider the possibility of wide application of dual education in the adult education system. In Bulgaria, the participation of adults in educational activities is at a rather low level, below 2% in 2022. The country is in penultimate place in the region, with only Romania having worse indicators. The agenda of lifelong learning policies includes a number of objectives for the acquisition of new skills and retraining of adults throughout their working careers. The application of the dual form of education has a direct connection with the objectives of the European Commission to increase economic competitiveness, as well as to improve the employability of European citizens.

According to data from the Ministry of education and science, in the vocational high schools in our country, the dual form graduated as follows - in the academic year 2021/2022 - 611 students, and in the academic year 2022/2023 - 1566. For comparison, the interest in dual education among adults in the licensed centers for vocational training is far less (Table 1).

Table 1: Data on the number of adults over 16 years who have completed dual training in licensed vocational training centers (source: NAVET)

Year	Number of dual training graduates over 16 years in licensed vocational training centers
2018	190
2019	145
2020	31
2021	107
2022	130
2023	203

In view of the new models of learning and working, it is important to position dual learning as an essential part of lifelong learning policies. In this way, the improvement of skills and retraining of adults will be supported, which will respond to the need for prepared personnel for certain economic sectors with an acute shortage of specialists. Taking into account the previous experience of adults and following the examples of the countries mentioned, the possibility of achieving greater flexibility regarding the organization of dual education for adults should be considered. Both the international experience in countries with traditions in the implementation of dual education for adults and the current model for validating professional knowledge, skills and competences acquired through informal and self-learning can be used as a basis.

Limitations of the study

This study also acknowledges its limitations. The analysis of the dual system is considered at a general macroeconomic level. Regional specificities and gender differences are beyond the

scope of this study. The implementation of the dual form of training for persons over the 16 years in licensed vocational training centers (VET) is not being investigated. Entrepreneurship as a form of economic realization for young people who have completed a dual education system is not considered in detail. The dissertation focuses mainly on the relationship between the requirements of employers and the acquired knowledge, skills and personal qualities of young people who have acquired a vocational qualification through dual training. The sample size of the empirical study was not significant – the pilot survey covered 55 individuals, and a detailed survey was distributed to 269 partner firms in dual form in 2023. 104 completed surveys were received from employer representatives.

II. STRUCTURE OF THE DISSERTATION

The dissertation is structured in two parts. In the first chapter, the research interest is directed to the preparation of an analysis of the state of the dual training system and the study of the possibility of linking the dual form of training with personnel management policies. The second chapter of the dissertation discusses the results of the conducted research and the potential of the dual system to support the implementation of human resource management policies in the organization. The volume of the dissertation work is 232 pages, of which 186 pages are the main text, 18 pages with information sources and 26 pages of appendices. 235 literary sources were used. The dissertation work is illustrated with a total of 9 tables and 35 figures.

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III. BRIEF DESCRIPTION OF THE DISSERTATION Introduction

The introduction of the dissertation presents the importnace of the topic, the purpose and tasks of the research, the object and subject of research, the research thesis, the methodology, which are presented in the first part of this abstract. The introduction ends with a brief statement of the structure of the dissertation work.

CHAPTER ONE: DUAL TRAINING. OPPORTUNITIES TO SOLVE CURRENT PROBLEMS IN HUMAN RESOURCE MANAGEMENT.

The first chapter is devoted to theoretical clarification of the concepts of education, training, learning, development, activity, awareness, attitude, ability, competence, employability, (professional) qualification and profession. In order to solve the current problems in HRM, opportunities are being sought to link dual training with policies related to human capital in the organization.

In the section *Theoretical orientations of practice-based learning*, the research interest is aimed at outlining the theoretical foundations of dual training. The guiding assumption is that the basic concepts of effective learning are related to practice.

Research in the field of experiential learning can be traced from the time of Aristotle to the present day. In 1984, David Kolb introduced the theory of experiential learning. Kolb's model was also influenced by other theorists such as Jean Piaget, Kurt Lewin, and John Dewey. Kolb's theory states that effective learning occurs when all four stages of the cycle (concrete experience, reflective observation, abstract conceptualization, active experimentation) are engaged in a balanced manner. This means that learners should be encouraged to participate in all stages of the cycle, rather than simply relying on their preferred learning style. Training based on direct experience is a process of active interaction of the future specialist with the realities of the profession, which is why in most European countries today internships, apprenticeships, laboratory practice and dual training are widely used (CEDEFOP, 2016).

Work-based learning refers to learning that occurs when people do real work. This work can be paid or unpaid, but must be real, ie. lead to the production of real goods or the provision of real services.

The theory of situated learning, developed by Jean Lave and Etienne Wenger, suggests that learning occurs in the context of the activity or environment in which it takes place (Lave, Wenger,

1991). In a work-based learning environment, people learn by participating in work tasks and watching others perform them. Newcomers become part of the community and gradually move to full participation in its socio-cultural practices. Initially, trainees participate from the periphery until they become more qualified and full members of the team.

Social learning theory was developed by Albert Bandura. It suggests that individuals learn by observing and modeling the behavior of others (Bandura, 2000). On-the-job training provides opportunities for individuals to observe and learn from their mentors, peers and managers. Bandura defines self-efficacy as "a person's beliefs about his ability to manage events that affect his life". Self-efficacy beliefs arise and are strengthened in the process of solving the problems that the situation presents to the individual. Bandura views self-efficacy as an important cognitive factor that influences human behavior and its outcomes through cognitive, motivational, affective, selective, and physiological processes (Kostova, 2017). He explains that successfully solving a problem situation increases a person's level of personal self-efficacy, and therefore one's own experience is key. It complements it with social experience and social persuasion. According to Bandura, a person who sees another succeed in an activity gains confidence that he too will be able to cope with the difficulties that arise. Feedback, praise, and encouragement from the mentor within real workplace training convince the individual that success is achievable.

For his part, Lev Vygotsky suggests that learning is a social activity that takes place through participation in shared activities (Shopov, 2007, p.101). In a work-based learning environment, people engage in work tasks and collaborate with others, resulting in effective skill acquisition.

Regarding the theoretical foundations in the field of apprenticeship, the theory of cognitive apprenticeship should be added. This theory, developed by John Brown, Alan Collins, and Paul Duguid, suggests that apprentices learn through directed participation in authentic tasks (Brown, Collins, Duguid, 1989). In an apprenticeship setting, skilled staff provide apprentices with opportunities to participate in tasks and gradually increase their level of responsibility and autonomy.

Jeroen van Merriënboer's 4C-ID model is a four-component learning framework with a focus on the development of complex skills and the transfer of learning to a real workplace (Merriënboer, 2019). This model describes educational programs as consisting of four components: learning tasks, supporting information, procedural information, and part-task practice. Learning tasks are treated as the backbone of the educational program and can be the most diverse, but always

based on goals (case studies, projects). They develop skills such as problem solving, decision making and drive the basic learning process known as inductive learning. Supporting information represents the connection between what students already know and what they need to know to complete a specific non-routine task. Instruction facilitates the construction of cognitive schemas and enables learners to understand new phenomena and processes. The supporting information for each subsequent level of complexity is expanded and enriched. Procedural information (just-in-time information) is a step-by-step instruction given to the learner before proceeding with the task. For each subsequent task, the need for instruction decreases. The last component of the model is the performance of partial tasks for the development of professional skills and is the most attractive part of it. The partial task practice method aims to reinforce cognitive rules through intense repetitive practice. Reinforcement is a fundamental learning process that eventually leads to fully automated cognitive schemas.

In the 1980s, J. Keller developed a systematic approach to integrating motivation into the design of the learning process (Parslow, 2021). The model is called ARCS (attention, relevance, confidence, satisfaction). These, according to Keller, are all four steps by which the motivation of learners can be increased and maintained. Some of the attention-grabbing methods offered by the model are: active participation through various interactive activities and role-plays; variety and opportunity for each learner to express himself, using different methods of presenting the learning content, applying humor in the learning environment, lots of visual materials and giving examples with specific stories. This model uses a problem-based approach to create motivating aspects of the environment to stimulate and sustain learner interest. Keller's theory consists of two parts: a set of categories synthesizing motivation research that helps identify the various elements of specific learner motivation, and a systematic pedagogical design for creating an enabling environment, consistent with the stimulus characteristics of an established learner profile.

Robert Heinich and Sharon Smaldino developed a model known as A.S.S.U.R.E (analyze learners - preliminary study of learners, state objectives - definition of the expected learning results, select methods, media and materials - determination of the methods that the instructor will use, utilize the technology, media and materials – for each chosen method, plan exactly how it will be applied, require learner participation - determination of how learners will commit to active participation, evaluate student performance - how will student performance be evaluated), which offers six basic steps in the process of planning effective instruction (Smaldino, Lowther, Russell,

2008). The analysis of learners should focus on those characteristics of them that are related to the desired learning outcomes. The information gathered will help with next steps and guide the selection of appropriate strategies and resources to support the learning process. The analysis should include general characteristics of students such as age, gender, available competencies, learning style. The next stage is the definition of the standard and objectives of the learning module, i.e. what students should know and be able to do after graduation. This describes the behavior and performance to be demonstrated, the conditions and the degree of absorption. The third step is choosing an appropriate method, with work-based training emphasizing learnercentered methods. However, there is a certain amount of important information and technology that the teacher or mentor must convey and demonstrate. Once the teaching strategy has been determined, the tools and materials that will support its effective implementation should be selected. The next step in the process is related to the planning of the lesson, after which it is moved to ensuring the active engagement of the learners. Here, it is important to establish how a particular active learning strategy will be promoted. The last stage is related to assessing the impact and the degree of achievement of the set educational goals. The evaluation method and the effect of the applied teaching methods are defined.

Another non-standard approach to structuring training modules is the "Backward Design" approach proposed by Grant Wiggins and Jay McTighe (Wiggins, McTighe, 2016). This model aims to get instructors to consider the learning objectives of the course first. These learning objectives include the knowledge and skills that instructors want their students to have acquired when they complete the training.

The three stages of this model are:

- Stage 1. Identifying the desired outcomes in this framework, educators focus on what students need to know, understand and be able to do.
- Stage 2. Determining acceptable evidence this seeks to answer the questions of how it will be known whether students have achieved the desired outcomes and met the standards and what will be accepted as evidence of understanding and skills acquired.
- Stage 3. Planning learning experiences and instruction with clearly defined outcomes and defined evidence, instructors can now plan learning activities, incl. choice of methods, sequence, required resources.

Component analysis, also known as component mapping theory, was developed by educational psychologist David Merrill (Merrill, 2006). It can be applied to identify the skills and knowledge required to perform a particular task or activity. The theory suggests that any complex task or activity can be broken down into a set of component skills that can be identified and selfassessed. The main conclusion of component mapping theory is that complex tasks or activities can be decomposed into component parts, allowing for more effective learning and instruction. By identifying the composite skills needed to perform a specific task, educators and mentors can design targeted instructional programs that focus on building those specific skills.

Robert Gane's theory of learning conditions states that there are several different types or levels of learning and each different type requires specific types of instruction. Gane identified five main categories of learning: verbal information, intellectual skills, cognitive strategies, motor skills, and attitudes. Each type of training requires different internal and external conditions. For example, in order for cognitive strategies to be mastered, conditions must be created for the development of new solutions to problems. In order to create attitudes, the learner must have a reliable role model. Gane suggests that learning tasks for intellectual skills can be organized in a hierarchy according to complexity: recognizing stimuli, generating a response, following a procedure, using terminology, distinguishing, forming a concept, applying rules and solving problems. The main meaning of the hierarchy is to identify the prerequisites that must be met to facilitate learning from each level. Prerequisites are identified by performing a task analysis.

Learning hierarchies provide a basis for the logical sequence of training development.

The theoretical framework of practice-based learning reveals a rich variety of tools and practices, critical areas related to their application and outlines important trends in the development of mechanisms for implementing dual learning. The thesis about the role of practical training for the full mastery of a given profession is confirmed. The conceptual clarification of the process of organizing the dual form of education outlines a number of issues that are the subject of analysis and commentary in the first chapter of the dissertation. The most important of them is the question of identifying those human resources management policies that are directly related to the realization of the dual training and can be supported through it.

In this chapter of the dissertation, the normative regulation of the dual system in Bulgaria is also considered. Normatively, the process for organizing the dual system is well regulated and indicates the order of inclusion of all interested parties in it. There is regulation regarding the

eligibility of companies that want to partner by providing a workplace and a mentor for practical training. Corresponding by-laws are foreseen to regulate the obligations of each of the parties in the dual system – the learner, the training institution and the business. An organization has been created regarding the requirements for conducting training for mentors. From the point of view of relevance and completeness of the regulatory framework, the second chapter of the dissertation presents specific proposals for its renewal, based on the results of the conducted research.

In the section *The dual form of education in the Bulgarian education system*, a historical review of the introduction of the model of practical education in the education system was carried out. The most significant projects for dual education in the country and the upgrading of the model over the years are presented. The review proves that the practice-based training model for acquiring a qualification has serious traditions in our country and in different time periods has played a significant role in the construction of professionally prepared personnel needed for the economy.

Section *Implementation of the dual system in a European context* offers a comprehensive presentation of good practices in the implementation of dual education in the countries of the European Union (EU). The first part describes in detail the practices of 16 EU member states (Germany, Austria, Switzerland, Italy, Lithuania, Denmark, Belgium, Croatia, Cyprus, Estonia, Malta, the Netherlands, Portugal, Slovakia, Spain). As can be seen from the presented review, the dual form of education in Europe is widely used and is supported by a number of measures and initiatives. The dual training model as a solution for building human capital finds great support in national vocational education and training systems and even in the EU higher education system. Common to all European countries is that the acquisition of a professional qualification is tied to specific levels of the European Qualifications Framework, which ensures greater transparency and facilitates labor mobility within the EU. In this part of the dissertation, dual training practices as a form of training employees for various economic sectors and in countries outside the EU (Russia, North Korea, North Macedonia, India) are also considered.

The comparative review of the practices of the dual system in Bulgaria and abroad proved that the dual training system offers the most effective format for acquiring a profession, providing trainees with the opportunity to develop practical skills and competencies.

It is evident from the review that practice-based training is the most effective way to develop professional competencies. Taking into account the specific subject of the dissertation research, according to which dual training supports the implementation of policies related to human resource

management, we can argue that to a large extent the identified heterogeneous models of dual training promote the construction of human capital useful for both business and and for society.

In the Functional Area of Human Resource Management section, the research interest is focused on outlining the specific human resource management policies that are directly related to the implementation of the dual training. In considering the essence and main characteristics of each of the selected policies, the indicators used to measure the effectiveness of the given HRM policy and the potential of the dual system for linking it to it have been studied. Starting from the idea of the functions in an organization and the units of each value chain, the activities in a company can be grouped into six areas for strategic functional analysis: financial strategy, human resources strategy, technology strategy, supply strategy, production strategy and marketing strategy (Atanasova, 2015). Building functional strategies requires clarity about what competitors are doing to realize their unique advantages. The following policies related to different areas of human resource management and development and their relationship to dual training are discussed separately:

- Human resources requirement planning policy, job analysis and design
- Recruitment and selection policy
- Policy for the adaptation of new employees
- Remuneration and social benefits policy
- Performance appraisal policy
- Training and career development policy

Job design is directly related to analysis, but has a different purpose. It has more of a prognostic character and finds practical application mostly in the creation of new jobs, in the introduction of new technologies or in the restructuring of the company's activities. It can also be used when updating job descriptions. Personnel planning is an element of the general strategic activity of the organization. It begins with defining the company's goals, goes through balancing the production program and the resources for its implementation, takes into account the financial aspects of this provision and ultimately leads to the development of specific plans for increasing labor productivity, for recruitment, training and qualification, transfer (movement) of personnel. The most frequently applied methods for defining the general needs of human resources are the method of expert assessment, the method of direct calculations, as well as various mathematical methods (Shopov, 2007, p. 57). There are several approaches to developing policies related to job

design. Scientific management is associated with Frederick Taylor and emphasizes the technological aspect of work. Taylor offers a systematic approach, scope of tasks, detailed description of work, systematic planning and fragmentation of operations, ubiquitous control. The essence of the approach is related to dividing work into basic elements and simplifying it. Elton Mayo's human relations model focuses on the social needs of employees in the work activity and their impact on work performance (Bruce and Nyland, 2011). Mayo argues that light, temperature, ventilation, and other factors of the work environment affect productivity much less than relationships. It is the social needs of the trainees and their mentors that are satisfied when applying the dual form of training. The mechanistic approach suggests determining the individual operations performed in the position and arranging them in order to reduce the time required for their implementation and the efforts made by the staff. At the next stage, a certain number of interrelated operations are included in one job, and the result is specialization. Specialized jobs require little time to perform each operation and result in short work cycles. To this day, the mechanistic approach is applied in assembly operations and emphasizes the efficiency of labor, time, production costs, training and the period required for its implementation.

The socio-technical approach presupposes the existence of work groups whose members perform specific roles. Roles change according to employee preferences and qualifications. In the dual system, new learners are engaged in simple operations such as stacking, sorting, packing. But when gaining experience and developing professional competences, one moves to tasks associated with a higher degree of responsibility and independence.

Heckman and Oldham's model is based on job design based on job characteristics that help motivate the performer. These include the performer's diverse skills and abilities, identification of the task and expected outcome, task significance, autonomy, feedback for implementation (Stefanov, Peycheva 2013). It is no accident that this approach is the most widely used in practice, including in dual training. The ability to gradually master tasks of varying complexity, to improve professional skills and to receive timely feedback on the quality of performance influence the motivation of trainees.

An important indicator of a properly conducted policy for planning the need for human resources, analysis and design of positions, is employee satisfaction (Spasova, 2023). It makes it possible to assess how satisfied employees are with their work roles, with the work organization, as well as with the work environment and the company as a whole. Satisfaction is often measured

through surveys and questionnaires that examine various aspects of the job, including job tasks, management effectiveness and workplace conditions.

Other indicators that are applied to measure the effect of the implemented policy for human resource demand planning, analysis and job design are: % of unfilled strategic positions, % of employees with a proven need for new skills, as well as % of employees who will are retiring in the next 5 years.

Participation in the dual training system provides an opportunity to apply the policies for planning the required staff and designing the posts. Employers can, to a certain extent, guarantee the provision of a certain number of staff on the basis of the places applied for and the partnership agreements concluded with schools. Although the initial functions of the trainees are of an unsophisticated nature, they gradually increase their contribution to the company's overall activities. To put this in perspective, planning for the number of staff required with a view to the planned development of the firm in 1-2-3 years' time tells management how many and what kind of trainees to recruit today, in three months' time and in a year's time, so that they are prepared for when they are predicted to be needed.

Once the workforce needs and the requirements that candidates must meet have been determined, the process of attracting and selecting the necessary human resources proceeds. The enterprise's recruitment and selection policy is directly linked to ensuring productivity and to training and pay policies. Attraction and selection policies can be developed following three fundamentally different approaches:

- focus on finding the most suitable person for the vacant position;
- focus on finding the most suitable person for the company;
- search for flexible workers and employees.

All three concepts correspond to the use of the dual training as a source of recruitment. Therefore, companies looking for new approaches in recruiting potential employees could include in their HRM systems the provision of a workplace for practical training in a dual form. Dual learning partnerships can be an integral part of recruitment and selection policies for organizational needs, overcoming some of the challenges associated with direct entry into the labor market. By participating in a partnership for the dual form of training, companies can attract young people to start their first job. Individuals trained in a dual form are familiar, their qualities and shortcomings are known, and they themselves do not need a long period of adaptation.

One of the important indicators of the effective implementation of the recruitment and selection policy is the time to hire. Time to hire is one of the most widely used metrics for evaluating recruiting activities. It measures the number of days between applying for a job and receiving a job offer. Time-to-hire provides insight into recruitment efficiency, as long time-to-hire processes are defined as inefficient. A lengthy recruitment process may result in the loss of qualified staff to the competition or an increase in the workload of available staff. On the other hand, too short a time to hire may be a signal of insufficiently thorough candidate research. Optimizing time to hire is important to ensure productivity in the enterprise. Time to fill indicates the number of calendar days it takes to find a candidate and is typically measured by the number of days between the vacancy announcement and the hiring of a selected candidate. This metric provides an overview of the speed and quality of the entire recruitment process and candidate experience.

Selection quality measures the value the new employee brings to the organization. This metric evaluates the effectiveness of the recruitment process and the long-term impact of new hires on the organization's business results. The quality of the selection is usually evaluated based on criteria such as the performance of the newly hired employee, contribution to the achievement of team and organizational goals, integration into the enterprise culture and the degree of retention over time.

Hiring cost is a metric that measures how much it costs an organization to hire new employees. This indicator again shows the effectiveness of the recruitment process. Hiring costs are reported for a selected period of time and may include costs for recruitment experts, administrative costs, marketing costs, technology costs, and more.

Through orientation programs, new employees are introduced to organizational values, rules and procedures, accelerated integration and clarification of quality standards applied in the company. The human resources department is usually assigned that part of the orientation that is related to general organizational presentation, company history, specifics of the activity, rules of internal discipline, rules of health and safety at work. Line managers orientate new employees on issues related to a specific workplace, duties and responsibilities, relationship of the position with other positions and the final results of the team. Table 2 presents a comparison between traditional and dual training, regarding the different types of adaptation to work.

Table 2. Comparative characteristics of the types of adaptation in traditional and dual form of education

Type of adaptation	Traditional training form	Dual form of training
Professional	The practice is short-term and does not always come close to the real conditions for exercising the profession	The learner gains clarity about the chosen profession, performs specific work duties, bears official responsibility, immediately applies the acquired knowledge and skills at work
Psychophysiological	The trainee gets to know the working conditions and the work regime	The trainee gets to know and get used to the working conditions and work regime
Social-psychological	The learner gets to know the specifics of the chosen profession	The trainee works with a mentor, learning teamwork and becoming part of the system of relationships in the organization
Organizational and administrative	The learner has information about the structure of the organization	The trainee gets acquainted with the structure of the enterprise, immerses himself in the social and corporate culture of the organization, gets used to the management style
Economical	In rare cases, the trainee receives payment for the produced output	The trainee receives a stipend/remuneration for the period of the dual training

The comparison shows how much more effective the adaptation for a specific position is overall when conducting dual training. At the end of the period, the trainee becomes a full-fledged employee in the given company, ready to perform the work assigned to him.

The share of employees who left early is an important measure of the quality of the policy for orientation and adaptation of newly appointed employees in the enterprise (Peicheva, 2014). It measures the percentage of employees who leave within the first year and is perhaps the most important metric for determining a company's hiring success. It is also known as the labor force stability index - the ratio between the number of employees with more than one year of employment and the number of employees with less than one year of employment (Vedar, 2014).

This indicator shows whether there is a mismatch between the employee and the organization or between the person and the position held. It usually takes 6 to 12 months for employees to fully master job tasks and reach an optimal level of productivity. The cost of replacing an employee can be 1.5 to 2 times the employee's annual salary, especially in more responsible positions.

The labour turnover index is another key indicator and takes into account the ratio between the number of leavers during the year and the average number of persons employed in the organisation during that period. It can be defined by staff category, by unit or in other necessary cross-sections. It can also be combined with a performance indicator to measure the percentage of high and low performing staff leaving. This index indicates to the HR function how attractive the positions and teams in each organizational unit are. Turnover data should be used in evaluating managers and in the overall development of retention strategies.

The managerial style effectiveness indicator measures the impact of leadership style on employee performance, motivation and overall organizational climate. Leadership competencies are an integral part of modern workforce management and organizational succession planning. The value of a leader is determined not only by his or her individual success, but also by the success of the team he or she leads.

Through the remuneration policy, the company's management philosophy of attracting, retaining and motivating staff is realised. It is common for a reward management policy to include the development, implementation and maintenance of monetary and non-monetary payment systems that help to improve the quality of work performance and company results. Remuneration management policy in any company aims to address the tasks of attracting potential candidates, retaining employees with good job performance, gaining a competitive position in the labour market, increasing productivity, complying with current regulations, supporting strategic objectives, and reinforcing and shaping structure.

The effectiveness of the implementation of the activities of the remuneration and social benefits policy is measured by various indicators (Spasova, 2023). Revenue per employee is a measure of the quality of the workforce. The ratio looks at the ratio of the organization's total expenses divided by the current number of employees and is usually calculated on an annual basis.

Billable hours per employee is another important metric that is related to employee utilization and refers to the amount of work time an employee spends performing paid tasks. It is

most often applicable to organizations in the service sector. Correlating this kind of results to the commitment of employees and the quality of the performance of work tasks provides an opportunity for an interesting analysis.

HR costs per employee refer to all costs associated with personnel management functions over a period. This includes salaries of HR experts, software costs, training, recruiting, benefits administration and more.

Overtime costs refer to the additional costs incurred by the organization when employees work beyond their normal working hours and are compensated at a higher rate as required by labor law and/or internal company rules. These costs are a form of direct labor costs and can significantly affect an organization's salary budget.

Other significant indicators that are tracked in the field of wages are the indexation of wages on an annual basis and according to the level of inflation, as well as the level of labor remuneration compared to the level in the country or in the sector.

Since dual system training implies more basic skills, the pay is in the form of a stipend and is most often tied to the amount of the country's minimum wage. Germany, the country with the most solid traditions in the implementation of the dual form, reports an important contribution of the trainees to the final results of the company. Dual training enterprises invest around 26 billion euros per year in training their skilled workers in the form of training fees, training staff costs and material costs (Hippach-Schneider & Rieder, 2022). Of this, about 62% goes to the costs of the trainees - mainly the training fees, and 23% is the cost of the training staff. Research from previous years has shown that training a trainee costs an average of around ϵ 20,000 per year, but the net costs are significantly lower due to trainee productivity and other benefits to the firm, which increase as training progresses. In return for training costs, trainees contribute by producing goods and providing services as part of their work. This productivity offsets about 2/3 of training costs, resulting in approximately ϵ 7.7 billion in net training costs incurred by training businesses.

Statistics show that almost a third of trainees in Germany make a profit for their companies.

The stipends received by trainees and the additional financial incentives received by mentors are also part of the organization's remuneration policy. A well-structured pay system can offer the participation of mentors in dual training as an additional opportunity for pay increases.

Training is a strategic function of the organisation's human resource management. It is directly related to the competitiveness and growth of the business. Training and career

developmentpolicies aim to ensure that organisations respond and adapt adequately to the continuous technological growth and globalisation of economies. With regard to staff training, there are different ideas in theory and application. What most of them have in common is that training should be a systematic process, because it improves employees' work performance, skills and also their motivation.

A key point in developing human resource training and development policy is comparing investments in people development with the expected benefits of those investments. The significant difficulties of parametrizing the direct and indirect economic results of investing in personnel training confirm the understanding that the synthetic economic expression of the benefit of these investments should be replaced by the effects that are expected from it in the work behavior of employees and by here and in the activities of the organization. The nature of an axiom is the understanding that the company's strategy and policy for the qualification and development of personnel is a direct function of the strategic goals, its technological, production and market strategy, the plans to achieve the set goals and to implement the developed strategies.

In companies that apply the dual form of training, training policies also include the specialised training of mentors. After identifying those who meet the requirements for mentors in terms of experience and qualifications, the next step is to provide their training. Specific training needs are defined according to the current mentor training programme (Mentor Training Programme, 2019).

Mentors in companies, by undergoing specialized training, develop skills to pass on their experience to inexperienced individuals and assist in building their professional competencies. The benefits for mentors are related to improving communication skills, gaining experience in giving constructive feedback and taking on greater responsibilities to the company.

The financial feasibility of the programmes is an issue related to training planning as an element of human resource planning. Financial resources are needed for trainers as well as for supplementary materials and for staff remuneration when employees are away from work.

The training and career development policies also include measures to evaluate the effect of the training and cost-benefit analysis. The financial costs incurred for the training are compared with the income from the completed process. The benefits of training and their manifestation take time and cannot always be directly measured by a quantitative measure. This is precisely one of the

reasons for the skeptical attitude of some company managers towards the dual form of training. Building professional expertise takes time, and investment in training pays off in the long run.

The complex evaluation of the effectiveness of the conducted training can be carried out by applying the 4-level Kirkpatrick scale. A major advantage of this model is the focus on the behavioral outcomes of the training participants (Mann & Robertson, 1996). It consists of four levels: reaction, learning, behavior, results.

One possibility for dual training firms to retain trainees who have demonstrated a high level of acquired skills is by "selling" career paths within the organisation. The dual form implies that the initial positions are not very high, thus attractive for young people. But if the company has clear rules for internal growth by position (junior, senior, chief specialist, etc.) and by pay levels, this could serve as an incentive to retain the trained individuals.

Another direction in which the application of the dual form in HRM systems can be sought is in-house programs, known as talent management. Retention of talented employees can include inclusion in mentor training and providing additional development prospects after mentoring ends.

Regarding assessment as part of the mentoring function, there are several models that describe the mentoring relationship. One of them is the Goodlad model, which contains four phases of a mentoring relationship – initiation, cultivation, transformation, separation (Shudak, 2017). Essentially, during initiation the mentor must demonstrate commitment to the trainee. In the cultivation part, a strong focus is placed on the company mentor's belief in the learner's success. In the transformation phase, the mentor from the company encourages independent action. The separation stage is about integrating the learning into practice and making the trainee progress.

Assessment is generally divided into two categories with different purposes: formative and summative assessment. The summative assessment (also known as the learning assessment) refers to the final assessments (including tests and exams) after the completion of the dual study programme. It is used to determine whether trainees have achieved the program learning outcomes or competency standards that would contribute to obtaining the desired professional qualification. Formative assessment (also called assessment of learning) draws on information collected at frequent intervals throughout the learning process in order to identify specific needs and adapt learning and teaching accordingly (Looney, 2011).

The extent to which the policy for training and career development in a given organization is implemented in the right direction is determined by the use of various metrics.

The cost of training one employee is an indicator that measures the average cost of training and development of each employee for a certain period (Spasova, 2023). This indicator is key to understanding the investments the organization makes in improving the knowledge, skills and competencies of its staff.

Time since last promotion is a measure of internal growth in the organizational structure that can provide valuable information in turnover analysis.

The average annual number of training days per employee is an indicator of the development of staff skills and qualification improvement.

The percentage of trained employees to all employees shows management's vision for investing in human capital.

Evaluating labor performance is an activity of the enterprise's management to collect and analyze information on how the worker or employee performs in the labor process; preparation of an opinion on his work and on the results achieved; proposing measures to increase the efficiency and competitiveness of production. It enables, first of all, to establish: the specific achievements of the employees; the internal and external factors that had an impact on the results of their work; the changes that need to be made to improve the quality and effectiveness of their work (Shiplett, 2005).

In the theory of human resources, management (Alkalai, Bancheva, 1999) there is a grouping of the objectives of certification in three main areas:

- Evaluation of qualifications the level of qualification of the employee (knowledge, skills and competences) is determined, and then it can be compared with a benchmark;
- Evaluation of the results of the work the quality of performance of the work tasks, implementation of the individual work plan (such as quantity, term and quality) and achievement of the set goals is evaluated;
- Assessment of personal qualities the basic qualities of the employee as a person are determined, and then the resulting profile is compared with a standard (the set of professionally significant qualities for the relevant position).

According to Yammarino and Waldman (1993, p.60), "in assessing the level of job skills, multiple sources of assessment of skill application are needed".

Important performance indicators for performance appraisal policy are engagement rate, absenteeism rate and overall work performance.

The degree of staff commitment is perhaps the most important of the results of the human resources unit in the organization (Peicheva, 2014). Employees who enjoy their work and are proud to be part of an enterprise are generally more engaged, even if the workload is high. Engaged staff perform better and are more likely to perceive work challenges as positive and interesting. Additionally, engagement is an important indicator of team manager success as well.

Absenteeism, like turnover, is an important indicator of dissatisfaction. This metric calculates the frequency and duration of employee absences. Reviewing it regularly can help identify the reasons (other than health) that underlie the problem of high absenteeism rates. Performance and potential is another metric related to measuring performance and ranking employees according to their potential. For this purpose, various quantitative or qualitative ways of measuring performance are applied. Performance metrics measure individual and team performance against predetermined goals. Like other indicators, here the method of calculation depends on the sector and type of activity of the enterprise, as well as on the scope of the position. The presented human resource management policies can find support in their implementation by introducing a dual training system in the enterprise. A review of the organization's human resources management policies that are relevant to the implementation of dual training shows that it can make the most significant contribution to staff planning and recruitment. As a result of the analysis of the considered human resource management policies, several main challenges for further research are outlined:

- Are company management representatives and human resource management experts fully aware of the possibilities offered by the dual system?
- Are there obstacles to the implementation of the dual form of education, which, if overcome, would make it more widely used?
- Is there a need for normative changes in the legislative framework to support companies to participate in dual training in the country?

In the next part of the research, through a survey among employers participating in dual training partnerships, answers are sought to the question of how it can be used to implement activities related to job design, planning, selection, adaptation, pay, ensuring continuity and career development of staff. Specific recommendations are reached, the purpose of which is to increase the efficiency of the implementation of the dual system in support of business.

CHAPTER TWO: PRESENTATION AND ANALYSIS OF RESEARCH RESULTS CONDUCTED

The second chapter examines the researched issues from a practical point of view. The results of the study will confirm or reject the research thesis that dual training can play an essential role in implementing human resource management policies in the organization. Based on the conclusions of the conducted studies, measures and recommendations are identified to support its wider application.

In the section *Methodological framework of the study*, the methods for the implementation of the research task are described:

- Structured interview with dual training experts
- Pilot study with representatives of a target group of experts directors of training institutions, managers of companies, mentors of trainees, experts in professional qualification, trainers of mentors, experts from the non-governmental sector, involved in the dual education system. The pilot surveys were distributed and processed between May and July 2022.
- Survey research with a target group of human resource management experts, managers and company owners who participate or have participated in dual training partnerships. The survey among employers was conducted in the period May-July 2023.
- Two focus groups with HRM experts and participants in the dual system trainees, in 2024.

The first tool is a structured interview with a target group of experts involved in the implementation of the dual education system in our country. The purpose is to formulate questions for the planned survey, shape the directions for each question, refine the proposed answers to the closed questions, supplement and verify the research questions. After conducting the structured interviews, the collected data were processed and systematized. The analysis of the results of the interviews was used in the structuring of the questionnaires in the next stage of the research. Weaknesses that were noticed by the interviewees and are mainly related to the wording of some of the questions have been removed in the survey card. The second instrument that was implemented was a short questionnaire to determine the attitudes towards the implementation of the dual form of education. The purpose is to check the accuracy of the formulated questions for the survey and to refine the answers that will be offered to the respondents. The advantages of the

pilot study lie in the possibility of ensuring that the questionnaire for the larger study is completely and correctly completed.

The questionnaire is structured into closed and open questions. The profile of the respondents is determined by questions about the professional sphere, the position held and the experience of the organization in the dual system. The following are questions related to the choice between advantages and disadvantages of implementing dual training. Without seeking exhaustiveness, seven advantages and eight disadvantages are multiple-choice, selected from the primary, analysis and research processed within the dissertation research. Respondents are invited to select three of the advantages and three of the disadvantages in order to highlight precisely those positives and weaknesses of the implementation of dual training that are relevant to the study, rather than to achieve comprehensiveness. It is possible to add another answer in free text. Within the framework of the research, 55 questionnaires were received and processed in the period July - August 2022. The way of formulating the questions in the survey, as well as the answers received, allow the possibility of ranking the advantages and disadvantages, according to whether they are indicated or not as prioritized by the respondents.

The pilot study proves the need for wider promotion of vocational education and training in general, emphasizing career guidance of students, informing parents and joint activity in this direction with employers. With regard to the attractiveness of the VET system in general and the dual form, in particular, it is necessary to work in the direction of updating the educational documentation, a broad information campaign to engage parents as well. It is appropriate to provide training programs for a wider profile and attractive occupations, as well as to emphasize the acquisition of key and transferable skills that are needed in a dynamically changing labor market. The active participation of business through engagement in the entire VET process is extremely important - from the development of study plans, programs, study documentation, to the provision of conditions for practical training and the development of work skills among the trainees.

All the aggregated opinions from the pilot survey complement and support the objectives of the study, and their relevance was assessed by the participants in the in-depth study.

The responses collected were used to structure the larger survey, with new questions added to clarify the strengths of the dual system and the potential for its even wider application. The upgrade of the methodology has been achieved with the following enhancements to the toolkit. Based on the collected proposals as a comment, the issues related to the specific HRM policies that

are supported through the dual system have been developed. The questions on benefits were extended with questions about the benefits of employing youth through a dual form of training and the benefits for the particular organization that chose to partner. Data were sought on the qualities of trained youth that employers are satisfied with, as well as an overall assessment of the employability of persons who have completed dual training. The benefit of practical training with a mentor, which is the core of the dual form of professional qualification, is discussed in detail. Questions about possible measures to increase interest in the dual system on the part of parents, students, educational institutions and employers have also been added.

In the section *Empirical research among employers*, participants as partners in the dual training system, the results of the following study are presented, the purpose of which is to examine the subjective perceptions of employers regarding the possibilities through dual training to solve the challenges related to human resources management. The questionnaire is structured in 26 questions.

The data analysis is based on the results of a survey conducted in 2023 among 104 respondents, representatives of companies that provide jobs and mentors for practical training. The data show that the largest share among the surveyed participants are small and medium-sized companies, followed by large companies with a staff of over 250 people. The organizations in which the respondents work are mostly privately owned (88.5%). As can be seen from the results, the survey was completed mainly by the management and expert team in the organizations, which is important from the point of view of direct contact with trainees and mentors involved in dual training.

In the study of employers' attitudes towards the implementation of the dual system, the main advantages and disadvantages according to them as a key partner in it are analyzed. Figure 3 and Figure 4 present the employer responses that show the most frequently cited strengths and weaknesses of dual training, from the perspective of the specific organization.

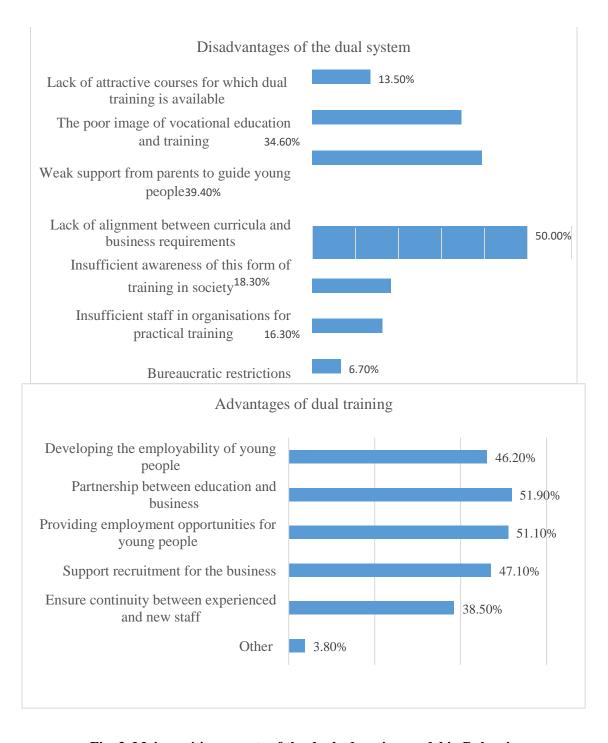


Fig. 3. Main positive aspects of the dual education model in Bulgaria

Fig. 4. Disadvantages of the dual form of education in Bulgaria

A large share of the surveyed employer representatives (51.9%) point out as the main advantage of the model the partnership between education and business, as well as the possibility of providing work for young people. One of the main reasons for expanding the dual education system in Bulgaria is to provide specific skills for the labor market of young people and to address the problem of youth unemployment. The reasons for it are objective, but through the educational system, it can be influenced in a positive aspect and the scale of manifestation can be reduced by changing the qualities of work. A number of researchers point out in this regard that on-the-job training is expected to lead to a natural equalization of labor supply and demand (Lamza-Maronić, 2014). Vocational secondary education is generally associated with easier initial integration into the labor market, which is proven and widely recognized in the scientific literature (Zimmermann, 2013). The dual system, which combines theoretical education in schools and practical training in a work environment, further increases the adaptability of the education system to the labor market. Brunetti and Corsini demonstrate in their study of selected EU countries that vocational education often increases the employability of secondary school graduates relative to general education graduates, but its impact is in some cases not statistically significant, while dual vocational training systems perform better (Brunetti, Corsini, 2019).

The question "Which of the following elements of the company's human resource management policy are supported by dual training? is key to solving the research task of the present dissertation study. The summarized responses are presented in Fig. 5 on the next page. he results are categorical (75%) that the most serious support through the dual system is provided in terms of staffing. Based on the answers of the surveyed employers, we can conclude that assisting the selection and selection of employees is the most important benefit of dual training. At the heart of the dual system is the idea to ensure the acquisition of professional qualifications, the possibility of employment and a career in the chosen business sector through investments in human capital on the part of the state and business. When we examine the role of the dual system in supporting recruitment policies, we argue that dual training programs offer a number of benefits to employers, including providing employees with training tailored to the needs of a particular workplace, more cost-effective recruitment, addressing the mismatch between skills in demand and in supply. Last but not least, access to motivated talent is also important: students enthusiastic about the opportunity to replace the traditional form of classroom learning with real exposure to their chosen

profession in a company. Realizing the potential of on-the-job learning schemes as a driver of productivity requires particular attention from human resource management experts.

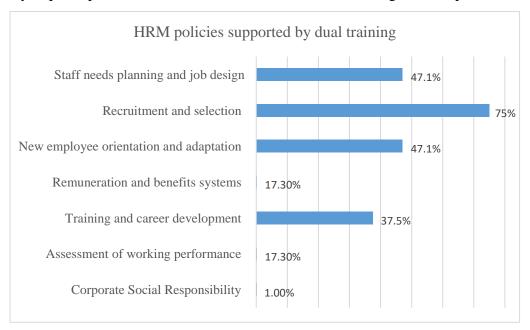


Fig. 5. HRM policies supported by dual training

In the next place with an equal number of answers (47.1%) are the policies for the planning of personnel needs, together with the design of positions and policies for the orientation and adaptation of new employees. Effective management of organizational structure and numbers is one of the most significant functions of the Human Resources Management units. Dual training can play a significant role in the implementation of the company's personnel policy, including:

- in the planning of recruitment and selection activities
- to provide employees with the necessary qualifications, skills and professional competences
 - to implement the adaptation policy in the company
 - to provide a pool of talent for future career development
 - when implementing activities to promote mentoring
 - to develop a system for staff succession and training

Indirectly, the implementation of a dual form of training in the company affects the reward and motivation systems and is always part of building the image of a socially responsible employer and the development of the corporate culture. As part of the social responsibility of business and

the direction of sustainable development, a number of companies implement projects to attract young people and support the creation of a future highly qualified workforce. The organization of practices and internships finds its logical upgrade in the application of the dual form of training. It combines elements of apprenticeship, mentoring, adaptation and career planning in relation to young people.

To be included as partners, HR professionals, together with operational managers in companies, should assess which jobs are suitable for students. If positions with simpler functional responsibilities are not available, it is good to consider dual-form admission of adults. Here comes the question of the readiness of HR departments to perform this preliminary screening against the available positions in the organization. That is why, in the next part of the dissertation, we propose a model of a mechanism for determining suitable positions for a dual form of education in the organization.

For 37.5% of the respondents, the dual form of training can be used to implement training and career development policies, and according to 19.2% – for implementation as part of the remuneration and social benefits systems. The conditions that will stimulate companies to join the dual training system point to a study of the reasons for the still weak participation of businesses in the system. Possible limitations to the inclusion of smaller companies could be sought in several directions. First of all, lack of free financial resources to ensure the organization of practical training (mentor training, costs for the trainee, etc.). Second, the lack of guarantees for the return on investment in the training of individuals through the retention of trained personnel. Other inclusion limitations may be assumed beyond the study information. An obstacle would be the lack of trained mentors who meet the requirements of the current regulations, as well as the number of trainees who can be accepted for practical training in smaller companies.

In the section *Findings from conducted focus groups*, the results of focus groups organized to validate the information collected by means of the above-described tools and to get an answer to the question about the link between dual training and HRM policies are described. Professional qualification experts and HRM specialists from various organizations took part in the first focus group. The second one is aimed at the direct users of dual training - the trainees included in dual training.

Section *Possibilities for strengthening the link between HRM policies and dual education through improved efficiency of the dual system* is structured in three subsections with specific proposals:

- Suggestions for improving the model at the system level;
- Model of a mechanism for determining positions in the organization suitable for inclusion in the dual system;
- A model for analysis and assessment of the employability of persons trained in a dual system.

CONCLUSION

The conclusion summarizes what has been achieved in the dissertation work.

Dissertation research set out to answer the question of what is the role of dual training for the implementation of human resource management policies in the organization. The issue is relevant given the requirements of the modern dynamically changing labor market and the active state policy in the direction of imposing the dual system. The assumption that dual training can play an essential role in the implementation of human resource management policies in the organization has been confirmed. Modernization of vocational education is only possible hand in hand with business. The introduction of targeted measures can help to implement dual training on a national scale. Such measures may include targeted incentives for companies, methodological guidelines for its effective introduction in companies, active professional guidance for students, modernization of regulation in the field. The overview and specific recommendations offered in the dissertation can serve as a confident next step in this direction.

IV. CONTRIBUTIONS OF THE DISSERTATION

- 1) The dissertation is built on the basis of an innovative approach, in which the dual education system (DVET) is considered as an opportunity to effectively solve a number of challenges to human resource management (HRM) policies. Useful research results have been obtained within this approach.
- 2) A comprehensive systematic picture of dual education at a conceptual level is presented, including a variety of systemic solutions for DVET in multiple EU and non-EU countries are identified. On this solid basis, the state of DVET in Bulgaria has been studied in the context of the stated topic. The research provides convincing guidelines for understanding the state, problems and opportunities before the DVET, for the improvements and developments that should be implemented.
- 3) In the process of the dissertation research, the operability of the research program and the adequacy of the data processing project were verified. This result can help to improve research strategies and tools in this area.
- 4) Based on the obtained results, well-defended proposals to the interested parties employers, educational institutions, legislators are substantiated. Through them, the content and scope of the necessary actions are determined in order to maximize the desired effects for each of the stakeholders and society as a whole.
- 5) Innovative practices are proposed models, mechanisms and tools for linking the two systems DVET and HRM, including:
- a) a mechanism for assessing positions in the organization suitable for dual training;
- b) a model for assessing the employability of dual education graduates.

V. PUBLICATIONS RELATED TO THE THESIS

1) Toneva, S., (2022). "Dual training - a good solution to current socio-economic problems", "Vocational education magazine", 2022, vol. 3 [Тонева, С., (2022). Дуалното обучение - едно добро решение на актуални социално-икономически проблеми, сп.

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- 2) Toneva, S., (2023). "Implementation of the dual form of training in Bulgaria problems and challenges", Vocational education magazine", 2023, vol. 2. [Тонева, С., (2023). Реализиране на дуалната форма на обучение в България проблеми и предизвикателства", сп. "Професионално образование", 2023, бр. 2.]
- 3) Toneva, S., Vedar O. (2023). Digital horizons for dual training, Public policy. [Тонева, С., Ведър О. (2023). Дигитални хоризонти за дуалното обучение, Public policy.]
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