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CHALLENGES AND OPPORTUNITIES FOR THE SUPERVISORY PRACTICE IN RESPONSE TO CHANGES IN MODERN DOCTORATE

The research findings give prominence to the debates in the educational, social, cultural, economic and political context on modern doctorate as a whole and doctoral supervision in particular as an integrated complex of activities, in which supervisors have to respond to the growth and diversification of the PhD candidates. The innovations recommended by the Salzburg Principles and involved all the facets of doctoral training, as well as the milestone events in doctoral education reforming are highlighted. Prerequisites for change in the supervision structure, including transition from an obsolete and irrelevant traditional supervision model to a multiple supervision model (double, joint or panel supervision), from the traditional person-to-person relationship between a supervisor and a supervisee to a more structured and regulated supervision procedure are determined. The requirements of the UK Code of Practice for the Assurance of Academic Quality and Standards in Higher Education clearly outlining the roles and responsibilities of supervisors and doctoral students, as well as criteria for defining eligibility and capacity of a supervisor are specified in the context of doctoral supervisory practices. Experience and best practices of some European universities, in particular those of the United Kingdom and Australia as the first countries to develop their best supervisory practice models in the 1990s, forming the basis for a supervision culture and the guide for supervisors to undergo voluntary or mandatory supervisory training and to develop methodology and toolkits for PhD supervision process are specified in detail. The most formidable challenges of supervisor training and professional development are defined, and the ways of overcoming them are analyzed. The recommendations of Helmut Brentel, an advisor of doctoral supervisors at European universities, on the ways of ensuring high-quality supervisory practice to be taken into consideration by universities and individual supervisors in their practices in order to ensure quality in supervision by providing an integrated set of actions, measures and tools are specified.

Key words: doctoral supervision, supervisor, supervisory practice, supervisory development, supervisor preparation, doctorate, supervisee, PhD student, doctoral training, doctoral preparation, challenges.

Since the Berlin Communiqué in 2003 included doctoral and postdoctoral levels in the Bologna Process as the third cycle emphasizing that the two mainstays of the knowledge-based society are the European Higher Education Area and the European Research Area based on research and innovation dissemination, and mobility, doctoral training has undergone the substantial modifications in order to bring research training programs in line

with the required standards to meet the challenges of the global labor market, advancements in technology, and demands of PhD candidates. The EU has determined training of doctoral candidates through research as one of the priorities to achieve the overarching Lisbon objectives that is “to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion” (*Briefing note for the meeting of the EMPL Committee 5 October 2009 regarding the exchange of views on the Lisbon Strategy and the EU cooperation in the field of social inclusion*). All this provides not only for educational, but also for social, cultural, economic and political context. In this regard, a demand has arisen for increasing the number of research innovators who will make significant contributions to national economic growth and be able to tackle global challenges the society faces. A plenty of various stakeholders from academics, higher education institutions, policy makers, public authorities, funding organizations to employers and the job market for PhD holders are interested in the development of doctoral training tailored to meet their changing specific needs. In order to be the countries of international standing and known as science and innovation campuses having world-class universities, they should have world-class research capacities that provide for improvement in the excellence, efficiency and quality of PhD training and education.

In 2003, the European University Association (EUA) launched its project “Doctoral Programs for the European Knowledge Society” with involvement of 48 university institutions from 22 countries that provided a first overview of the doctoral education landscape in Europe. The project outcomes, including but not limited to, the need for diversity of doctoral education on both national and institutional levels, and doctoral training organization and funding, career development of PhD holders and transversal skill training were presented at the EUA Seminar “Doctoral Program for the European Knowledge Society” held in 2005 in Salzburg, Austria. Furthermore, the Bologna Process Conference held in 2005 in Salzburg focused exclusively on doctoral education and resulted in issuing the Conclusions and Recommendations from the Bologna Seminar on “Doctoral Programs for the European Knowledge Society” (*Doctoral Programmes for the European Knowledge Society*). The 10 Salzburg Principles (2005) were instrumental in the structure of the Third Cycle (Doctoral) Studies and involved the following aspects: “advancement of knowledge through original research as the key element of doctoral training; expanding employment opportunities beyond academia; designing the

doctoral programs and research training to meet new challenges; ensuring diversification of doctoral programs; considering doctoral candidates to be early stage researchers making a key contribution to the creation of new knowledge; highlighting the crucial role of supervision and assessment, which in turn should be based on a transparent contractual framework of shared responsibilities between PhD candidates, supervisors and the institution; achieving critical mass by doctoral programs focusing on different types of innovative practice being introduced in universities across Europe; introducing appropriate time duration (three to four years full-time as a rule); promoting innovative structures: to meet the challenge of interdisciplinary training and development of transferable skills; increasing mobility; ensuring sufficient amount of funding” (EUA-CDE, 2016a). All the above have contributed to the formation of the unified vision of doctoral education and research training across Europe.

The innovations recommended by the Salzburg Principles involved all the facets of doctoral training. First and foremost, it was essential for universities to make transformational changes on both organizational and program levels. One of the major changes from the perspective of our paper was reconsideration of a supervision model, supervisor’s profile and procedure for PhD students being supervised. The other innovation touched upon diversification of doctoral education programs and assumption of responsibility by universities for ensuring doctoral training tailored to meet their needs in a proper manner.

One of the milestone events in doctoral education reforming was creation of the Council for Doctoral Education in 2008 by the European University Association (EUA-CDE) with the mission to be instrumental in the development and improvement of doctoral education and research training in Europe.

Doctoral training is an important component in the university strategy as it facilitates the institutional process as a whole. The reform of doctoral education aimed at increasing the efficiency and quality of doctoral training by increasing the successful ratio of PhD candidates, reducing duration of doctoral training, and increasing employability of new PhD holders by providing them with new sets of transferable and generic skills has made it possible for universities to reach new heights. The ultimate result of doctoral training is a new PhD holder to be prepared for a huge diversity of career trajectories in the knowledge society of our times both in and outside academia. In addition, the EU documents, including the Salzburg Principles,

focused on the importance of cooperation with the public sector and industry, as well as facilitating intersectoral cooperation in doctoral training. In this regard, cooperation between universities and stakeholders has become an obligate framework for introduction of new doctoral programs.

In recent years, the issue on doctoral supervision has been the area of concern for both Ukrainian and foreign scholars. Hutt, C. H., Scott, J., & King, M. in their research focused on positive and negative aspects of PhD students' experience in the process of being supervised. Mawson, K., and Abbott, I. explored the idea that supervision for competent professionals should initially focus on identity, in addition to progress and process. Shultze, S. investigated the identity development of academics as well. Boberg, I. and Devine N. investigated the way of the doctorateness development while creating a new form of an understanding of research. Carr, S. M., Lhussier, M., & Chandler, C. studied the features of the supervision of professional doctorates considering different approaches applied by supervisors. Nichol, L., Cook, J., & Ross, C. focused on opportunities and challenges arising out of coaching for doctoral supervision and proposed a new collaborative action for doctoral supervision model providing for individual and shared responsibilities and skills of supervisors and supervisees required for the effective process of supervision. Rowan, L. & Grootenboer, P. outlined a range of theoretically-informed teaching innovations, including insights from student researchers in order to create student-centered and engaging learning environments, on educational rapport and relationship-centered doctoral education, Botha, N. described the cohort supervision model and the extent it facilitated doctoral success. Gray, M. A., & Crosta, L. studied new perspectives for supervisors and supervisees in online doctoral supervision: Bøgelund, P. has studied the supervisors' perception of PhD supervision and extent to which supervisors modify their practice in today's university context. Lee, A. focuses on the ways of developing supervisors for the modern doctorate. Turner, G. describes the four journeys of gaining experience in learning to supervise and challenges for developing expertise as a doctoral supervisor. Despite much literature on the reforming of doctoral supervision, development of supervisors and improvement in doctoral supervisory practice are relatively new and understudied areas that require deeper insight. Wisker, G. describes the features of a good supervisor, focusing on the strategies of effective supervision of PhDs, postgraduate and undergraduate research and encouraging supervisors to reflect on and enhance their research supervision practice. Taylor, S., Kiley, M., and Humphrey, R. in their handbook highlight

aspects to assist doctoral supervisors in supervisory practices and to address challenges for those supervising doctoral candidates.

The goal of the study is to find out challenges and opportunities for the doctoral supervisory practice in response to changes in modern doctorate, to determine further trends in the development of the phenomenon under study.

The goal to be sought is implemented by applying the following groups of methods:

- general scientific (analysis, synthesis, comparison, generalization and systematization, which made it possible to clarify the theoretical approaches that form the basis for doctoral supervisor preparation);
- specific scientific (method of genetic analysis, method of structural and logical analysis; method of structural and functional analysis);
- empirical (analysis of projects, codes of practice, guidelines of international organizations, universities and research institutions on the issue of doctoral supervisory practice, regulatory documents in the field of doctoral supervisor training and development).

The introduction of changes to doctoral training and in particular supervisory practice was conditional upon the needs for PhD graduates to gain employment outside of academia and to be equipped with new sets of transferable skills, for the single supervisor model to be updated, and for universities to abandon their overreliance on a single supervisor guiding of the PhD student performance and development. A great deal of changes provided for the appearance of new types of PhD students and doctoral programs; development of research career paths outside academia; the need to promote mobility at the doctoral level; formation of transferable and generic skills, as well as transdisciplinary research and studies in the process of doctoral training; enhancing value of originality in research conducted at the doctoral level; reinterpretation and rethinking of PhD supervisors' responsibilities and competences; paramount necessity to establish regulations and frameworks to enhance the quality of supervisory practices and experiences; and the need to develop structured doctoral programs to be properly tailored to meet both PhD supervisors' and students' needs.

In order to specify the need to train and develop a doctoral supervisor it is expedient to begin with the Wisker's statement "... In the light of diversity, change and demand, supervisors and institutions need to focus on supervisory developmental needs and practices. The role has become visible, and it needs to be clarified and developed, recognizing differences from one subject to

another, one institution to another, one supervisor to another” (Wisker, 2012). The supervision of doctoral candidates is considered to be a mainstream activity of academics as the emerging conditions put universities under a great pressure so that they will equip PhD holders with complete and broad sets of the required skills and competencies to make significant contributions to innovation and economic growth. In response to the above challenges and requirements universities have introduced new structures to facilitate the development of a wide range of transferable skills for PhD candidates, to improve their personal and professional development (Scholz et al., 2010).

Recent reforms in doctoral education have necessitated the need for a change in supervisory practice which has become more demanding. As “the doctoral journey has been supplemented with a number of additional demands, activities, responsibilities, duties and opportunities for doctoral candidates” (Taylor et al., 2010; Scholz et al., 2010), supervisors’ profiles and obligations have expanded to facilitate the efficient completion of doctoral studies by PhD students. A supervision model, which plays an important role in PhD students’ experiences in their doctoral studies, has changed from the traditional, person-to-person relationship between a supervisor and a supervisee to a more structured and regulated supervision procedure. It has moved away from reliance on a single supervisor to dependence on two or more qualified members of a supervisory team. The supervisory practice is not only completed between the supervisee-supervisor relationships since the nature of research within some disciplines requires an increase in the number of supervisory teams. Supervision procedure significantly influences the quality of experience and training of doctorate holders (Nerad & Evans, 2014; Masek & Maizam, 2020; Park, 2005).

In consideration of the foregoing, the traditional model of doctorate is to some extent circumscribed. It is arguable that the modern model of doctorate casts doubts on traditional PhD training since it concentrates on knowledge transfer and creation, practice, and gives the opportunity for experimental study. “For some time this single-purpose qualification has no longer fitted the expectations of students and employers. Increasingly, Government, funding bodies and higher education institutions (HEIs) are questioning the nature of the PhD” (Park, 2007). The traditional supervision scheme was characterized by lack of external scrutiny, accountability and transparency.

In the contemporary context, supervision is the main part of the PhD training process which affects the PhD student’s performance. According to

the modern requirements, for the entire duration of the PhD training each PhD student must have at least two supervisors – a principal supervisor and a primary co-supervisor. The principal supervisor shall be held liable for implementing the PhD program to be planned in consultation with the PhD student. In general, the principal supervisor and co-supervisors are appointed at the stage of enrollment of the PhD student in the doctoral program. But in some cases, additional supervisors or co-supervisors may be appointed during implementing the PhD program. All supervisors must have experience and required qualifications in the relevant subject areas. The principal supervisor must be a researcher in the relevant subject area, have seven-year research experience, work at the relevant faculty as associate professor or senior researcher and be aware of the requirements and the PhD program. It should be mentioned that PhD students who conduct their research in a company or at any other institution outside the university should also have a supervisor from the institution or company concerned. In addition to the principal supervisor, PhD students must also have supervisors at the company employing them. This supervisor is appointed by the head of the PhD school subject to agreement with the relevant company's management. The supervisor must be qualified in the relevant field of research. The primary co-supervisor must have an academic level equivalent to associate professor, but does not have to be employed at the faculty. The primary co-supervisor shall be held liable for contacting with and supervising the PhD student at least twice a year. It is permissible to appoint one or more co-supervisors during implementation of the PhD project (Baptista, 2011; Borrell-Damian et al., 2015; *Good practice recommendations for integration of transferable skills training in PhD programmes*, 2020; Hasgall et al., 2019; Lee, 2007).

From the perspective of our study, it is expedient to focus in more details on alternatives to the traditional supervision model which in certain cases fails to meet the most demanding needs of doctorate holders. The efficient doctoral journey depends on the efficient supervisory practice, and therefore universities make every effort in this direction. One of the measures is introduction of multiple supervision models: double, joint or panel supervision which are considered to be more transparent and provides for consulting and seeking advice from other academics in addition to the principal or primary supervisor of a PhD student. One of the types of doctoral supervisory practice is co-supervision or joint supervision of doctorate holders. This practice is used when the one-to-one supervisory relationships

are inadequate and have some drawbacks, including but limited to, showing little interest in PhD students, research topic, providing little assistance, unwillingness to discuss student's ideas, and failure to give relevant skills and knowledge. Co-supervision or joint supervision means the process when two or more faculty members have joint and several liability for guiding a PhD student from the enrolment stage to the stage of doctoral program completion. In addition, the term "co-supervision" refers to the interaction of the members of a supervisory team who guide the doctoral student during their doctoral studies. It should be mentioned that in some countries the co-supervisory model is used mainly to assist academic-newcomers in developing their supervisory skills (Brentel, 2017; *Briefing note for the meeting of the EMPL Committee 5 October 2009 regarding the exchange of views on the Lisbon Strategy and the EU cooperation in the field of social inclusion*; Carmesin et al., 2015; Carvalho & Cardoso, 2020; Karolinska Institute).

In this regard, the UK Code of Practice for the Assurance of Academic Quality and Standards in Higher Education. Section 1: Postgraduate Research Programs (2004) clearly outlines, inter alia, the roles and responsibilities of both supervisors and doctoral students, and clear criteria for defining the eligibility and capacity of a supervisor. According to this document, ensuring consistent and transparent supervision interaction is a key pillar including the "four needs": to provide PhD students with regular and appropriate supervisory assistance; encouragement to interact with other researchers; advice from one or more independent source (internal or external); and arrangements in case of unavailability of a supervisor. The above principles underpin the standards established by universities or research institutions for supervisory practice.

The first requirement of the above Code of Practice states that "institutions will appoint supervisors who have the appropriate skills and subject knowledge to support, encourage and monitor research students effectively" (*UK Code of Practice for the Assurance of Academic Quality and Standards in Higher Education. Section 1: Postgraduate Research Programs*, 2004, p. 14). First and foremost, the document in question focuses on the supervisor competence and continuous professional development. All supervisors must have appropriate expertise to be constantly updated by participating in various supervisor training and development programs. Newcomers will be involved in specified activities to develop their supervision competence. Supervisors engaged in supervision for years should demonstrate their continuous professional development through

participation in a range of activities and measures aimed at supporting their role as supervisors. Supervisors should be proactive in updating their skills and knowledge by sharing best practices. The mentor-mentee relationship is the example of providing support for supervisors. To ensure a systematic nature of supervision process for those engaged in industry or professional practice it is expedient for institutions to arrange for such supervisors' professional development courses and programs.

The next requirement of the Code of Practice is that "each research student will have a minimum of one main supervisor. He or she will normally be part of a supervisory team. There must always be one clearly identified point of contact for the student" (*UK Code of Practice for the Assurance of Academic Quality and Standards in Higher Education. Section 1: Postgraduate Research Programs, 2004, p. 14*). The supervision models and interactions depend on the PhD student support arrangement provided for by the institution and its internal research rules and regulations. One of the ways of efficient supervision arrangement is involvement of a supervisor in a supervisory team that will enable to provide the PhD student with multifold assistance including but not limited to: other scientific personnel and students in the subject; a departmental adviser to PhD students; a faculty postgraduate tutor; or other academic support tutors. The principal supervisor and co-supervisor or, as the case may require, other members of the supervisory team, will ensure that PhD students receive sufficient support to facilitate their academic progress. The supervisory team will have at least one member currently engaged in research in the relevant area of expertise in order to provide the student with access to subject knowledge and research developments. Due to extensive knowledge and practical experience of the supervisory team members the PhD student will have the opportunity to turn to any supervisor for help on all stages of the doctoral studies. In all cases, a student should have an identified single point of contact, normally the principal supervisor. The PhD student should be aware of the possibility to refer to the relevant contact for any matters if the principal supervisor is not available. As a rule, it is a designated member of academic staff who is able to provide advice and support. The names, contact details and responsibilities of the principal supervisor and co-supervisor(s) are specified and communicated to PhD students upon registration (*Doctoral Programmes for the European Knowledge Society. Final Report, 2005; Exploring Difference: The challenge of postgraduate education. A presentation from the Australian perspective; Lee, 2018; Nerad & Evans, 2014*).

“Institutions will ensure that responsibilities of all PhD student supervisors are clearly communicated to supervisors and students through written guidance”. According to this requirement, supervisor(s) and student should have a complete grasp of the scope of their responsibilities in order to understand the extent of supervisor’s support for the PhD student and boundaries of the supervisor’s responsibilities which may include:

- “providing doctoral guidance and advice at the appropriate level;
- being held liable for monitoring the progress of the student’s research program implementation;
- establishing regular contact with the student, and ensuring the supervisor’s accessibility to the student when such student needs some advice;
- contributing to the assessment of student’s development needs;
- providing constructive ongoing feedback on the student’s work in a timely manner, including overall progress under the research program;
- ensuring that the student adhere to ethical principles when conducting research and is aware of the potential consequences of research misconduct;
- ensuring that the student is aware of the opportunity to receive advice, in particular, career guidance counseling, legal assistance in issues on health and safety and equal opportunity policy at the institutional level;
- providing effective support and/or familiarizing the student with other sources of support, including student advisers (or equivalent), graduate school staff and other tutors in the academic community;
- assisting the student in interacting with other faculty members working in the field of research, for example, encouraging the student to attend relevant conferences, supporting in submitting conference papers and articles to refereed journals;
- maintaining the required level of supervisory competence, expertise and skills to perform all of the supervisory functions in a proper manner and continuing professional development opportunities” (*UK Code of Practice for the Assurance of Academic Quality and Standards in Higher Education. Section 1: Postgraduate Research Programs, 2004*).

Supervisors and co-supervisors will arrange their supervisory practice in such a manner as to meet the needs of PhD students. A material condition of the supervision process is to inform PhD students of the possibility to ask for support, and the way of giving it. Institutions shall be

held liable for ensuring that PhD students and supervisors may at any time examine documents concerning their responsibilities and liability.

One of the key measures to clarify and align different understandings and expectations regarding the doctoral studies is completion of the alignment of expectation sheet by the PhD student and the principal supervisor that may prevent misunderstandings and discrepancies regarding the supervision's extent and nature during the PhD program implementation. According to the alignment of expectation sheet, the area of competence of the principal supervisor shall be as follows: to establish the theoretical underpinning for the thesis research, select a promising dissertation research topic, check constantly that a PhD student is on task and working consistently, give feedback on presentations prior to conferences etc., maintain an effective working relationship between a supervisor and a PhD student, initiate frequent meetings with the student, be available to help the student at any time, provide emotional support and encouragement to the student, make the student aware of facilities and resources in the institution, assist the student in developing a network of fellow students, contribute to the direct writing of manuscripts or papers as any co-author, insist on seeing drafts of every section of the thesis to ensure its flawless performance and that the student is on the right track, provide career advice and preparation to the student, etc.

"Diversification, regulation and proliferation are just a few of the developments that pose major challenges for those supervising doctoral candidates" (Taylor, 2019). One of the prerequisites of the high-quality supervisory practice is training and development of a supervisor who is called the agent of changes. In this regard, universities provide professional development courses and workshops for new and more experienced doctoral supervisors in all disciplines responsible for doctoral holder supervision. The objectives of the PhD supervision training programs are to support supervisors by developing new skills and teaching competences and to encourage exchange between supervisors on a regular basis.

Through the lens of our study, it is expedient to consider the best practices implemented by reputable institutions with the aim of improving the supervisory practice.

The United Kingdom and Australia were the first to develop their best supervisory practice models in the 1990s, forming the basis for a supervision culture and the guide for supervisors to undergo voluntary or mandatory supervisory training and to develop methodology and toolkits for PhD

supervision process and publish the experiences gained in the process. The Go8 represent Australia's eight research intensive, comprehensive universities that win over 70 % of all university competitive research funds and supervise more than half of all postgraduate research students. In 2008, the Go8 arranged the meeting to discuss the development of the "Go8 PhD" – designing a framework for world-class research training. They recognized that doctoral supervision required training and constant upgrading as quality supervision was a key predictor of success (*Exploring Difference: The challenge of postgraduate education. A presentation from the Australian perspective*).

The UK is one of the countries, which has developed distinguished practices through introduction of compulsory supervisor training and development courses rendered by special departments and institutions (the Oxford Learning Institute). These courses are designed for both experienced supervisors and newcomers by rendering the initial and follow-up training sessions.

Imperial College London and Oxford University arrange the supervising doctoral courses that offer comprehensive and flexible training in the basic principles and practices of doctoral supervision to equip experienced supervisors and newcomers with a specific set of skills to support PhD candidates' development into independent researchers. The programs provide insight into the innovative and up-to-date supervisory techniques and methods, using video interviews, case studies, engaging and thought-provoking conversations, and measures to share best practices and to inspire supervisors with reflection on their own approach. In addition, the courses focus on the scope of supervisors' principal duties in supporting supervisee's scientific research, establishing effective supervisory relationships, new and emerging developments in the innovative supervisory practices enabling supervisors to maintain a current state of knowledge of the ever-changing environment, in which they are engaged. The course consists of 10 modules: introduction: the doctoral context; attracting and selecting doctoral applicants; research cultures and environments; managing expectations, responsibilities and relationships; planning and conducting research; developing the researcher and enabling progress; doctoral writing and effective feedback; supporting a candidate; preparing for completion and examination; developing supervisory practice (*Imperial College London*).

The University of Edinburgh offers an online course "Fundamentals of PhD Supervision" aimed "to help new supervisors develop their

understanding of the role and responsibilities of PhD supervisors, and to encourage experienced supervisors to reflect on and develop their practice with an increasingly diverse PhD student population. The course covers material which will help supervisors to support students during the whole PhD lifecycle from recruitment to completion. These include the following blocks: recruitment and induction of PhD students; supervisor responsibilities and building effective relationships; managing progress; supporting students through completion and final examination; supporting wellbeing, and professional and career development" (*University of Edinburgh*).

In addition, UK universities and research institutions implement programs of support for all staff responsible for research supervision. The core research supervision programs of UCL, London's leading multidisciplinary university, are divided into the three stages:

1) introduction to research supervision, which is mandatory for all staff intending to be newly appointed as a supervisor. This section provides insight into regulations and basic premises for research supervision; the ways of establishing and maintaining effective supervisor-supervisee relationships; developing doctoral skills;

2) development as a doctoral supervisor, which is mandatory for all staff intending to be newly appointed as a research supervisor, without prior doctoral supervisory experience. This section covers such aspects as policy and procedure for effective supervision, experiences and challenges with peers, further support and guidance;

3) ongoing professional development for research supervisors that offers a range of options for staff intending to continue their development as research supervisors (*UCL. Research supervision training and development*).

In consideration of the foregoing, the practice of the University of Westminster that applies a sound and solid approach to the supervisors' training and development deserves to be highlighted. It offers a wide range of developmental events and professional development opportunities to doctoral supervisors:

- supervisor forums which provide supervisors with a platform to share knowledge and best practice with peers, to gain support, information, and guidance on a range of topics concerned. They are held twice a year and mainly recommended for those new to supervision and potential supervisors;
- annual supervisor symposiums intended for those involved in supervising doctoral students and potential supervisors that use case

studies to stimulate discussion and learning of the best supervisory practices and differences in supervision environment;

- doctoral supervision module designed to all supervisors conducted twice a year. The University Certificate of Special Study in Developing Researchers: Doctoral Supervision and Academic Practice Module is intended for all supervisors but binding upon those new to supervision practice;
- tailor-made workshops, professional skill sessions and personal development planning activities, designed for supervisors to gain experience and develop skills relevant to the supervisory practice (*University of Westminster*).

The Graduate School of the University of Westminster offers the Graduate School Supervisor Program. As part of this program, it hosts two to three supervisor forums and a summer symposium each academic year. These events provide an opportunity for staff to network, share good practice, share their experiences, and explore a range of topics relevant to supervision with the University of Westminster and across the sector. Events often feature presentations and workshops from external speakers. Being a member of the UK Council for Graduate Education (UKCGE), which provides support and good practice across key areas, including but not limited to doctoral supervision, the Graduate School implements the Research Supervision Recognition Program as a professional development toolkit for supervisors to reflect on their supervisory practice in the context of the UKCGE Good Supervisory Practice Framework. This framework is designed to set expectations for all research supervisors, to support supervisor training and development programs, and to inform institutional policies so that the demanding nature of modern research supervision is properly recognized. It sets out at a national level the wide-ranging, highly complex and demanding range of roles that modern research supervisors must undertake to perform the role effectively.

The Good Supervisory Practice Framework enshrines the criteria for good supervisory practice:

- “recruitment and selection;
- supervisory relationships with candidates;
- supervisory relationships with co-supervisors;
- supporting candidates’ research projects;
- encouraging candidates to write and giving appropriate feedback;
- keeping the research on track and monitoring progress;

- supporting candidates' personal, professional and career development;
- supporting candidates through completion and final examination;
- supporting candidates to disseminate their research;
- reflecting upon and enhancing practice" (*Handbook for Doctoral Supervisors 2021/22*, 2021).

This framework is valuable as it also contains typical examples of activities that might be found in support of the criteria for good supervisory practice. Supervisors should be involved in the process of selection and recruitment of candidates at all stages from releasing to the public the areas of research supervision, and participating in campaigns to recruit candidates from underrepresented groups in doctoral education to making a final decision and giving feedback.

One of the prerequisites of establishing effective supervisee-supervisor relationships is awareness of diversified nature and composition of the domestic and international candidate population. The typical examples include discussion and mutual approval of PhD candidate's expectations at the initial stage of doctoral studies; consideration of supervisory styles and their harmonization with the PhD student needs; modification of supervisory styles in order to meet the changing needs and demands of doctoral candidates.

An obsessive drive of universities to provide their PhD students with more support and a broader array of expertise has resulted in the updating of the supervision model through transition from the reliance on one supervisor to the involvement of a team of supervisors or co-supervision. The typical examples of such practices are discussion and clarification of the roles and functions of co-supervisors upon commencement of doctoral studies, taking a new look at and rethinking of relations between supervisors, as well as candidates during the supervision process in order to eliminate any communication failure, lack of insight into the expectations and needs of PhD students.

In addition, supervisors will need to make sure that PhD students acquire the subject-specific knowledge, as well as experimental and technological skills required for them to be able to conduct research. The typical examples of such practices are the consideration of conceptions and misconceptions of research, reference points in research, issues of academic integrity, intellectual property rights, and co-publication; supporting PhD students in their choice of methodology; advising on skills

development in relation to the project; advising on issues arising in the course of the research.

Keeping the research on track and monitoring progress is a material requirement since failure of doctoral candidates to complete their degrees within the established three-four-year period entail financial penalties for universities. In this regard the typical examples include encouraging PhD students to make progress in their studies, using supervision to monitor progress, participating in progression-aligned activities, etc.

Since The 10 Salzburg Principles (2005) focuses on the need to expand employment opportunities beyond academia, the supervisor, in addition to his/her direct role within the modern doctorate in supporting PhD students' personal, professional and career development, may have an indirect role in supporting doctoral candidates to prepare for careers beyond academia. The typical examples of such practices are being good role models in terms of work-life balance; inducting candidates into disciplinary networks and activities; supporting their development as teachers; informing them about academic careers; supporting development of employment-related skills.

One of the important things for PhD candidates is effective dissemination of their research findings in order to maximize the benefit of the study. It is the supervisor who should ensure that the tailored outputs of PhD candidates are made available to the disciplinary and/or professional community for scrutiny and advancement of research in the subject. Supervisors are held liable for supporting PhD students to understand the service context of their research and disseminate its findings. The typical examples of such practices are setting expectations at the beginning of doctoral studies; modeling the process of publication; encouraging candidates to publish their research findings at national, regional, and/or local levels; co-publishing, etc. (Nerad, 2010; Nerad & Evans, 2014; Taylor, 2019).

The supervisors' self-reflection and enhancement in the supervisory practice provide for the identification of their strengths and weaknesses, evaluation of all aspects of the supervision process. As with other areas of academic practice, supervisors should undertake appropriate professional development to enhance their practice, which may include workshops and programs as well as familiarity with scholarly literature and its implications for practice. Where supervisors identify good practice, then wherever possible they should disseminate it for the benefit of others. The typical examples of

such practices are application of an appropriate combination of methods for assessing the supervisory procedure; ensuring initial and continuing professional development; review of the academic and research literature; contributing to the professional development of other supervisors, to the extent applicable (*Good practice recommendations for integration of transferable skills training in PhD programmes*, 2020; Taylor, 2010; Wisker, 2012; Wisker, 2012).

It should be noted that a doctoral supervision process is backed up by the UK Vitae Program that is the global platform for supporting professional development of researchers, experienced in working with institutions as they strive for research excellence, innovation and impact. Its goals are:

- to influence development and implementation of effective policy relating to researcher development;
- to enhance higher education provision to train and develop researchers;
- to empower researchers to make an impact on their careers;
- to evidence the impact of professional and career development support for researchers (*Researcher Development Framework. Vitae*, 2010).

Vitae has issued the Researcher Development Framework (RDF), which is a new approach to world-class researcher development and research base creation. It is a professional development framework for planning, promoting and supporting the personal, professional and career development of researchers in higher education. The RDF may be used by supervisors in their supporting the researcher professional development.

Benefits of using the RDF as a supervisor include:

- structuring conversations about professional development to ensure highly-focused apprenticeship;
- providing a framework to analyze the capabilities of team;
- identifying useful areas to consider when drafting training and development plans (*Researcher Development Framework. Vitae*, 2010).

The Researcher Development Framework is based on empirical data obtained as a result of interviews conducted with researchers to identify the characteristics of excellent researchers which are expressed as “descriptors”. The descriptors are structured in four domains (knowledge and intellectual abilities, personal effectiveness, research governance and organization, engagement, influence and impact) and twelve sub-domains, encompassing the knowledge, intellectual abilities, techniques and professional standards to do research, as well as the personal qualities, knowledge and skills to work

with others and ensure the wider impact of research. Each of the sixty-three descriptors contains between three to five phases, representing distinct stages of development or levels of performance within the descriptor. The RDF may be used as part of a downloadable Professional Development Planner to enable researchers to identify the areas to be developed further and to create an action plan (*Researcher Development Framework. Vitae*, 2010).

The University of Cambridge has a vast experience in doctoral supervisory training. It conducts through the Cambridge Centre for Teaching and Learning a series of workshops for supervisors (in particular, in Arts, Humanities and Social Sciences) that are intended for considering different aspects of the best supervisory practices:

- role as a supervisor: expectations and duties;
- administrative functions and requirements of the supervisor's role;
- reflection on best practices;
- sources of support provided by the university for supervisors;
- approaches and methods of supervising (*University of Cambridge*).

One of the workshops is designed for postdoctoral fellows to assist with the supervisory practice adhering to the principles of good supervision, establishing the efficient supervisor-supervisee relationship, developing the supervisor's skills, etc. In addition, the University of Cambridge provides courses aimed at assisting in co-supervision or mentoring process.

Scandinavian countries have achieved considerable success in the doctoral supervisory training practices. Professional development and training of PhD supervisors offered by Sweden universities, for example, the Karolinska Institute, consist of mandatory and obligatory parts. The mandatory training programs include web course that is tailored to principal supervisors and aimed at ensuring that all supervisors are familiar with the prevailing rules and regulations in force for doctoral education; introductory or refresher course for newcomers aimed at preparing participants for the role of a supervisor and providing insight into the responsibilities of a supervisor and a supervisee, the peculiarities of the effective supervision process (*Karolinska Institute*).

Introductory or refresher courses are binding on those who are registered as a principal supervisor. The goals of the course are, inter alia, to give participants understanding of the supervisor's main functions, roles and responsibilities. Moreover, participants are given the opportunity to discuss various aspects of the supervisory practice and the rules regulating doctoral supervision process, as well as the ways of dealing with different challenges

and problems. The course includes the following topics: supervision; roles, responsibilities and communication; supervisor and some legal arenas; research ethics; diversity and equal treatment; intercultural communication; doctoral education; intended learning outcomes; rules for doctoral education; recruiting a doctoral student; written assignment.

Web courses for supervisors are designed to provide the supervisor with the opportunity of being updated on the current rules and regulations that govern doctoral education. Participants must be aware of the relevant rules, laws, administrative documents and other relevant regulations required for conducting the supervisory practice in an effective and lawful manner.

Pedagogy for doctoral supervisors and designing doctoral courses are obligatory. Pedagogy for doctoral supervisors focuses on learning processes and supervisory pedagogy aspects. The goal of the course is to strengthen and stimulate the ability of participants to conduct a training/learning process that will encourage the doctoral holder to become an independent researcher. The course focuses on pedagogical theory and research on learning in doctoral studies. The course program is designed to consider the students' responsibilities and interactions according to various learning scenarios, academic progress and the ways of achieving the process of independence and intended learning outcomes.

The course provides a deeper insight into the supervision procedure and the doctoral learning process at an individual and group level. Participants try to develop their skills in identifying learning situations, formulating targeted learning outcomes, encouraging meaningful learning and using reflection in their supervisory practices. They are provided with the opportunity to be familiar with different research environments, to understand the rules and requirements applied in this environment. The course includes the following topics: good research supervisor; professionalism in the role of a supervisor; supporting the writing process through feedback; supervision in particular contexts.

Designing doctoral course focuses on the specific challenges and opportunities of doctoral education while meeting the needs of PhD students. Through pedagogical theory, instructional methods, information technology and assessment participants will understand the way of creating substance learning. The course is aimed to develop the participants' professional competence as university supervisor and teacher. In particular, the course is designed to increase knowledge about policies and best practices relevant to the planning, implementation and assessment of doctoral courses.

The course will address the central aspects of course design: how to create intended learning outcomes, how to make choices regarding content, how to choose teaching and learning activities, how to assess and grade student performance and how to evaluate courses and other teaching-learning activities.

It is worth noting that the Karolinska Institute has initiated a three-year international project to improve the supervision process of itself and its national and international partners. The institutions from Austria, Belgium, France, Germany, the Netherlands, Portugal, Spain and Switzerland, as well as Italy and the eastern European countries participate in this project (Lee, 2007).

The course “PhD Supervision: Rules and Regulations” implemented by the University of Copenhagen is designed specifically for PhD supervisors and research institutions. The objective of the course is that the participants will understand the complexities involved in PhD supervision; acquire process-related knowledge about PhD supervision; be able to transfer knowledge of the course to their own supervisory practices; be able to reflect supervising practices in the future. The course will cover the following issues: establishing a research position and integration of newcomers; roles and relationships; diversity; feedback and supporting autonomy; aligning expectations; early warning signs; motivation and self-confidence; stress and brain-fag among PhD students; collaboration among PhD supervisors and co-authorships; careers.

Advice and guidance are expedient if supervisors have no experience in supervising doctoral candidates or wish to take a new look at their roles and responsibilities. In order to develop doctoral candidates as competent researchers and individuals the supervisory process requires the supervisor to fulfill the functions of guide, mentor, information generator, contact point and coach.

This course provides supervisors with assistance in reflecting on and improving the process of supervision of their PhD candidates. It will help supervisors to improve the supervisor-supervisee relationship, exchange experiences with peers and the ways of addressing the main problems and get suggestions and tools to optimize the quality of supervisory practice. Participants will be given advice on the efficient supervisory process and tools for evaluating and developing supervisory skills, provided with a variety of instruments at hand to apply directly for improving supervision of PhD candidates.

The course is designed to address the following aspects: international developments in doctoral studies; problems and challenges of PhD students; problems and challenges of supervisors; best practices in supervision;

modification or adjustment of supervisory styles; improvement in the supervisor-supervisee relationship; drafting and conclusion of supervisory agreements; arrangement of supervisory meetings; monitoring student progress and academic performance; self-and peer-assessment, etc. (*Karolinska Institute*).

Over the last years, the experience of the European universities and cooperation in the European University Association (EUA) have brought the Germany institutions to revisit the traditional practices of doctoral supervision by offering workshops for PhD supervisors. The two-day initial workshops are intended for supervisors who are newcomers, one-day follow-up workshops conducted after about 6 months are offered for experienced supervisors, one-day workshops are offered for directors of graduate schools, train-the-trainer workshops, and one-day introductory workshops are intended for PhD candidates and focus on the contemporary concepts, techniques and tools in the sphere of doctoral supervising. These workshops provide doctoral candidates and supervisors with the opportunity to discuss issues regarding the supervision process and their relationship on *pari passu* basis. The two-day introductory workshop “Professionalization of Doctoral Supervision” focuses on the basic knowledge, bandoleer of capabilities and set of trans-border skills in doctoral supervision and the ways of their efficient application. It is a holistic approach that provides for 5 basic modules:

- major developments in supervisory practices at the global level;
- supervisory background – a monitoring and overview tool that helps doctoral supervisors and candidates keep an overview of the doctoral process in all its phases, individual elements as well as additional supervision and qualification instruments;
- supervisor’s changing roles and clarification of mutual expectations and establishment of effective supervisor-supervisee relationship;
- criteria, strategies and techniques of selecting PhD candidates for doctoral programs;
- detection of early warning signals of failures and risks related to the PhD students’ research, as well as analysis and solution of problems during the doctoral supervision process (Carmesin et al., 2015).

The content of the workshop modules and the supervisory skills covered by the modules are integrated, mutually interconnected and intertwined that enables to enjoy the edge from synergism positively affecting the supervision process and supervisor-supervisee relationship. The

workshop modules focus on the two elements that make the supervisory practice efficient – the consideration of professional expertise and specialized knowledge in detail and their embedment in the supervisor’s experience, as well as advocating an approach enabling new and existing supervisors to bore out the level of criticality and awareness of the responsibilities and challenges of doctoral supervision, using their own issues, expectations and ideas as a basis, and to develop the problem solving techniques. From this perspective, the workshop provides for teamwork sessions, which are conducted after the introduction and discussion of each module. During these workshops supervisors are given the opportunity to analyze the areas of concern arising out of supervisory practice, to consider and discuss supervision models and share best practices across disciplines. To conclude the workshop, the participants go through a one-hour “peer coaching” exercise, a peer consulting practice session, introducing them to the concept of peer consulting or a coaching technique for groups. The session provides for a problematic case in doctoral supervision and participants are given the opportunity to find solutions in interaction with one another. The workshop gives insight into literature on doctoral supervision and shows where to find extensive materials and resources online, and how working with a tool kit (containing e.g. worksheets, check lists, questionnaires, guidelines and form templates, for instance for progress reports) that simplify and structure the doctoral supervision process (Carmesin et al., 2015).

The follow-up workshops offer supervisors a platform to discuss their experiences, strategies and developments achieved by applying the suggestions and insights of the workshop. They talk about cases and problems in further peer coaching sessions. These workshops are aimed at activating the use of supervisory tool kits and developing the skills required to create custom supervisory tooling tailored to the individual requirements. The goal of these workshop concepts is to give supervisors support in their understanding and appreciating the value and conditions for success, not only of the required individual elements and modules, but of a comprehensive supervision culture created as a result of their individual and joint activities. In this context, the term “professionalization” in the workshop title underlines the need to train the skills required for the efficient doctoral supervisory practices and is beyond the scope of tips, tricks, advices and suggestions. Professionalization means self-perception and awareness of supervisors for the joint development of individual and institutional capacities for doctoral supervision at a high level. It is about a professional aspiration and a mutual

understanding by everyone involved that excellent quality doctorates can only be achieved through cooperation and creativity of the supervisors. Only they are ultimately able to develop the necessary concepts and supervision tools, as well as to disseminate them. This overriding qualification objective concerns transformation of the supervisors' self-image to being designers and creators of innovative and effective supervision concepts and sensitive advisors to their doctoral candidates. An example of the best practices implemented by Rovira i Virgili University in Tarragona is a three-year pilot project for developing the skills and expertise of PhD supervisors. Unlike most of institutions, which offer only non-recurring training sessions for some individual supervisors, Rovira i Virgili University has focused on the idea that development of skills and expertise of PhD supervisors can only result in a persistent modification and improve supervision culture if the workshop cycles cover a sufficiently large number mainly of younger supervisors within a predetermined period. Thus, the goal of the pilot project was to train 120 supervisors in 5 workshop cycles, each with two initial workshops and one follow-up workshop. One of the peculiarities of the above project was creation of community of the best practices in supervision after the second workshop cycle, where the participants could meet to discuss and share experiences outside the scope of the workshop. This is an excellent example of how workshops on doctoral supervision can give incentives for introduction of new, state-of-the-art concepts and strategies regarding the supervisory practices. It shows how some highly motivated young or experienced supervisors assist the university administration, the doctoral school and the center of excellence campus in applying a long-term integrated approach to doctoral supervision (Carmesin et al., 2015).

Furthermore, the university implemented the workshop program "Training for Trainers of Supervisors" (TTS), under which four participants of the previous workshops had been trained to become future supervision coaches in a basic workshop, with exercises for independently developing modules and through subsequent training assistantships. The outcomes of the workshops had positive and encouraging effects. Participants reported that changes in their supervision strategies and way of professional engagement and interaction resulted in an improvement in the supervisee-supervisor relationships in the first weeks after the workshop completion. There was an increase in the motivation and performance of their doctoral candidates resulting in the early detection of failures in selection processes and conflicts in supervision process (Carmesin et al., 2015).

One of the key elements of support provided by the Technical University of Munich for its academic staff is doctoral supervisor training programs which are aimed at facilitating the supervision of doctoral candidates on an academic and personal level. The training program implemented by qualified trainers covers various aspects of supervision, role as a supervisor, leadership through communication and other aspects, supported by best-practice examples in individual sessions. The training will provide trainee with a holistic overview of the efficient process of supervising doctoral researchers from recruiting to career development.

This structured program consists of eight modules that cover the following aspects: “understanding the role as a supervisor; leading through communication; communication over time – changes in supervisor-supervisee relationships; mental health (the need to act as a role model, self-motivation strategies, self-calming strategies in stressful times, knowing warning indicators for mental exhaustion, establish routines to keep strain and regeneration in balance, supporting doctoral researchers in dealing with different stressors, create a safe work environment); recruitment, onboarding and mentoring (selection of doctoral candidates, reflection on the ideal doctoral researcher, transferring theory into practice, creating a supervisory plan, reflecting unconscious biases); creating a positive and motivating work environment and promoting responsible research (trustful and motivating environment as a basis for responsible research, consequences of scientific misconduct, being a role model for good scientific practice, collegial intervention and case studies); effective career support for doctoral researchers (insights into the needs of doctoral researchers regarding career guidance, openness for the diversity of career options after a doctorate, awareness of various career support options, awareness for supportive measures which can easily be provided); looking back and future vision as a supervisor, insights from experts and networking (reflection: role as a supervisor after the training, definition of milestones and implementation strategy to put theory into practice, impulse lecture with a supervisory role model and panel discussion with previous participants of the doctoral supervisor training, exchange of experience and feedback)” (*Technical University of Munich*).

In light of the above, we can conclude that the doctoral supervision module runs once or twice a year and count as one completion for all staff participating in them. One of the most formidable challenges is a lack of follow-up, long-term training and support measures for supervisors. Most

universities offer only initial workshops on a one-off basis. There is an urgent need for the introduction of a multifaceted package of follow-up measures aimed at constant upgrading and supporting of supervisors in their future professional path.

Helmut Brentel, who has extensive experience and expertise as an advisor of doctoral supervisors at German and other European universities, in his overview of the ways of ensuring high-quality supervisory practice specifies the following types of training: initial workshops, follow-up workshops, workshops for experienced supervisors, lunch time meetings, peer group supervision, training for trainers of supervisors (Fig. 1) (Carmesin et al., 2015).

As can be seen from the above figure, a high, effective and consistent level of supervision may be achieved by creating a supportive supervision culture that will facilitate exchange of good practices and innovative ideas among supervisors, sharing experiences in supervision, implementing training schemes and coaching programs for supervisors. Internationalization should be also taken into consideration since doctoral candidates from all around the world can be quite a challenge. Workshops on supervising international doctoral candidates, supervision workshops for new international doctoral candidates, best practice partnerships are the measures, which will help supervisors plan and implement the effective supervision of international PhD students taking into consideration the diversification of profiles and background of PhD candidates, doctoral graduates' expectations regarding the PhD degree in terms of their career paths both inside and outside academia. One of the ways of improving doctoral supervision efficiency and quality is information support and communication, as well as regulatory documents and guidelines aimed at standardizing the supervisory procedure and bringing it in line with the European standards. To avoid risks of supervision conflicts or misunderstanding it is advisable for a supervisor and a supervisee to conclude at the beginning of the doctorate a long-term supervision agreement that will enshrine the required scope and suitable forms of support, mutual rights and obligations arising out of the supervisor-supervisee relationship, as well as other essential aspects. Doctoral supervision guidelines, codes of supervisory practice and other inter-university guidelines of a binding character are designed to clarify the supervision arrangements, roles and responsibilities of a supervisor and doctoral candidates during the doctoral studies, other helpful information

for all participants in the doctorate process. Checklists for initiating supervision are intended to reveal hopes and expectations of the supervisor and doctoral candidate regarding research area, time available for adequate supervision, the timeframe of the doctoral project, career goals of doctoral candidate to be pursued with the doctorate, etc.



Fig. 1. How to Achieve Outstanding Quality in Research Supervision by Providing an Integrated Set of Actions, Measures and Tools (by Helmut Brentel, 2014)

Thus, it is expedient to implement a plenty of measures aimed at addressing the challenges the modern directorate faces and improving the quality of supervision process at the national and global level.

Conclusions

1. Since the Berlin Communiqué in 2003 included a doctoral level in the Bologna Process as the third cycle, doctoral training has undergone the substantial modifications in order to bring research training programs in line

with required standards to meet the challenges of the global labor market, advancements in technology, and demands of PhD candidates. Recent reforms in doctoral education have necessitated a change in supervisory practice, which has become more demanding in the face of current and future challenges, connected with the requirement for training a new generation of creative, entrepreneurial and innovative early-stage researchers, restructuring knowledge and ideas into products and services for economic and social benefit. One of the important changes is transition from the circumscribed traditional model of doctorate to multiple supervision models (double, joint or panel supervision), from the traditional person-to-person relationship between a supervisor and a supervisee to a more structured and regulated supervision procedure. It has moved away from reliance on a single supervisor to dependence on two or more qualified members of a supervisory team.

2. From the perspective of our study, the UK Code of Practice for the Assurance of Academic Quality and Standards in Higher Education (2004) is the core document that clearly outlines, inter alia, the roles and responsibilities of both supervisors and doctoral students, and clear criteria for defining the eligibility and capacity of a supervisor. According to this document, ensuring consistent and transparent supervision interaction is a key pillar including the “four needs”: to provide PhD students with regular and appropriate supervisory assistance; encouragement to interact with other researchers; advice from one or more independent source (internal or external); and arrangements in case of unavailability of a supervisor. The above principles underpin the standards established by universities or research institutions for supervisory practice.

3. Introduction of multiple supervision models has caused the need to provide new and more experienced doctoral supervisors in all disciplines responsible for doctoral holder supervision with the opportunity to undergo professional development courses, initial supervisor training, follow-up training, workshops for experienced supervisors, lunch time meetings, peer group supervision schemes, training for trainers of supervisors. The objectives of the doctoral supervision training programs are to support supervisors by developing new skills and teaching competencies and to encourage the exchange between supervisors on a regular basis.

4. The experience of the United Kingdom and Australia is worth noting since they are the first countries to develop their best supervisory practice models in the 1990s, forming the basis for a supervision culture and the guide for supervisors to undergo voluntary or mandatory supervisory training and

to develop methodology and toolkits for PhD supervision process and publish the experiences gained in the process. Furthermore, some European reputable institutions and universities have implemented the best practices with the aim of improving their supervisory practice. The programs implemented by these institutions provide insight into the innovative and up-to-date supervisory techniques and methods, using video interviews, case studies, engaging and thought-provoking conversations, and measures to share best practices and to inspire supervisors with reflection on their own approach. In addition, the courses focus on the scope of supervisors' principal duties in supporting supervisee's scientific research, establishing effective supervisory relationships, new and emerging developments in the innovative supervisory practices enabling supervisors to maintain a current state of knowledge of the ever-changing environment, in which they are engaged.

5. One of the most formidable challenges of supervisor training and professional development is a lack of follow-up, long-term training and support measures for supervisors. Most universities offer only initial workshops on a one-off basis. There is an urgent need for the introduction of a multifaceted package of follow-up measures aimed at constant upgrading and supporting of supervisors in their future professional path. In this regard, the recommendations of Helmut Brentel, who has extensive experience and expertise as an advisor of doctoral supervisors at German and other European universities, on the ways of ensuring high-quality supervisory practice should be taken into consideration by universities and individual supervisors in their practices in order to ensure quality in supervision by providing an integrated set of actions, measures and tools.

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**Трансверсальність у професійній підготовці майбутнього фахівця:
глобальний, європейський та національний контексти**

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