OSOBLIWOŚCI KIEROWNICTWA BADANIAMI DOKTORSKIMI:
ANALIZA ZAGRANICZNEGO DYSKURSU NAUKOWEGO

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Streszczenie. Na podstawie analizy źródeł zagranicznych dotyczących problematyki naukowego kierownictwa badaniami doktorskimi doktorantów wyjaśniano, iż dane zjawisko jest wielowątkowe i dość dyskusyjne. Doświadczenie wiodących uczelni rangi światowej świadczy o tym, iż proces udoskonalenia kierownictwa naukowego jest stopniowy, zaś jako wynik jego rozwoju widzimy próby podejmowane ze strony zagranicznych naukowców w kierunku poszukiwania nowych, alternatywnych modeli organizacji kierowania naukowymi badaniami doktorantów uzasadniających i sprawdzających działalność wspólnego kierownictwa naukowego oraz potencjał kohorto-zorientowanej technologii oświatowej.

Słowa kluczowe: przygotowanie kadry naukowo-pedagogicznej, kształcenie habilitacyjne, kierownik naukowy, zarządzanie jakością przygotowania habilitacyjnego.

ISSUES IN DOCTORAL RESEARCH SUPERVISION STUDIES:
A REVIEW OF THE LITERATURE

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Abstract. IThe article is devoted to coverage of international educational trends in the reform of scientific supervision policy. The features of the quality assurance of the research supervision in the context of globalization of higher education are outlined.

Key words: PhD researchers training, PhD supervision, scientific guidance policy, research supervision culture, doctoral education quality management.

ОСОБЛИВОСТІ КЕРІВНИЦТВА ДИСЕРТАЦІЙНИМИ ДОСЛІДЖЕННЯМИ: АНАЛІЗ ЗАРУБІЖНОГО НАУКОВОГО ДИСКУРСУ

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Анотація. На підставі аналізу зарубіжних джерел з проблеми наукового керівництва дисертаційними дослідженнями аспірантів з'ясовано, що явище це багатогранне і досить дискусійне. Досвід провідних університетів світового класу показує, що процес удосконалення наукового керівництва, наставництва як освітніх інституцій є поступовим, і як результат поступу бачимо спроби зарубіжних учених у пошуку нових, альтернативних моделей організації керівництва науковими дослідженнями аспірантів обґрунтувати та перевірити дієвість колективного наукового керівництва, а також потенціал когорто-зорієнтованої освітньої технології.

Ключові слова: підготовка науково-педагогічних кадрів, докторська освіта, науковий керівник, управління якістю докторської підготовки.

Statement of the problem. An increasingly competitive market, globalization and internationalization trends have promoted new challenges for higher education and research quality assurance. The doctoral degree is perceived by most academic institutions as the pinnacle of educational achievement (C. Park; D. Jairam and Jh. Kahl) [24; 13]. The educational institution plays a large role in shaping the doctoral student into the future academic or practitioner. The training and development of doctoral students is an important function of most tertiary educational institutions. Doctoral students: "[create] the new ideas and knowledge upon which future educational activities can be built, sustained and nourished" [6, p. 236].

A fundamental characteristic of doctoral research is that it is carried out under the guidance of one or more academic supervisors. Although researchers have paid attention to many aspects of student learning and research in management education, one facet still seriously overlooked is that of research supervision [1].

Analysis of recent research and publications. In the educational management literature the pedagogy of supervision of higher degree research students has enjoyed limited but increasing attention in several strands (M. Kiley, G. Wisker) [16]. There has been extensive research done on effective faculty/student mentoring relationships in academia [1; 20; 23; 26]. Several problems, such as poor completion rates of research degrees (P.Burnett) [5] and delayed completion of thesis (M. Garcia, R. Malot, & D. Brethower) [10], have been found in work related to thesis in postgraduate and higher levels of education.. The quality of supervision has been often indicated as the main reason for these problems [25].

Consequently, the demand for professional development of higher degree research supervisors is increasing in importance and undergoing change, based on the

demand for timely completion of higher degrees and the Ukrainian state government's quality agenda driving improvement of practice.

The purpose of the present article is to: briefly review the theoretical foundation of the doctoral research supervision problem and provide content analysis of its key issues through the foreign research; discuss important substantive implications stemming from the educational management literature.

Findings. According to B. Lovitts, there are many factors that contribute to producing skilled and knowledgeable researchers [19]. B. Lovitts developed a theoretical model to increase understanding of the factors that lead doctoral students to "produce outstanding research and scholarship" [19,p. 39]. Figure 1 provides the full model.

At the core of the model is doctoral student completion and creative performance (i.e., the dissertation). The model consists of three main layers. First are individual resources. The five individual resources or personal characteristics impact student completion and creative performance: (a) intelligence, (b) motivation, (c) knowledge, (d) personality, and (e) thinking styles.
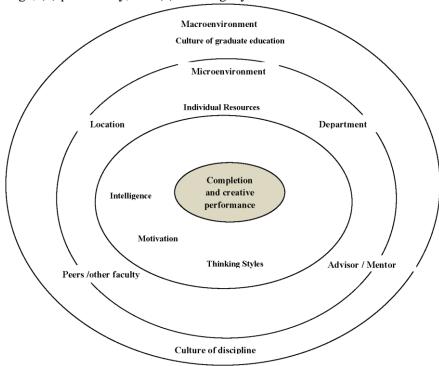

Figure 1. Model for understanding doctoral student success (B. Lovitts) [17].

Microenvironment, the second layer, includes the location, peers/other faculty, the department, and the advisor. The third layer is designated the macroenvironment. It includes the culture of graduate education and the culture of the discipline. According to B. Lovitts these three layers, the individual resources, the microenvironment, and the macroenvironment, interact. If any facet of the layers is deficient, the probability of a student completing the program and producing a quality dissertation decreases [17].

The mentoring relationship is important; as stated by R. Bargar and J.Mayo-Chamberlain, "the advisor is correctly seen as the 'significant other' for the student's journey…" [4, p. 420]. This relationship appears to be beneficial for both the student and faculty member; as L. McAlpine and J. Norton assert, a student can frequently be the supervisor's closest colleague [22].

Mentoring has been defined by E.Anderson and A. Shannon as: "a nurturing process in which a more skilled or more experienced person, serving as a role model, teaches, sponsors, encourages, counsels and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional and /or personal development" [2, p. 40].

From the PhD students' perspective, mentoring is seen as being extremely important and beneficial [21]. In a study by G. Luna and D. Cullen, 83% of the doctoral students reported they believed mentoring was important; in fact, all but four of the 109 respondents re-ported having a mentor [21]. L. Paglis, S. Green, and T. Bauer found having a mentor through the first two years of a doctoral program predicted the students' research productivity four years later. Additionally, L. Paglis, S. Green, and T. Bauer identified the relationship between mentoring and research self-efficacy of the student. Thus, having a mentor can positively affect a student's skill and knowledge of research [23].

Unfortunately, many faculty are not taught how to mentor (C. Golde & T. Dore) [11]. Mentoring can be viewed as a different form of teaching, yet some faculty do not understand this existing relationship between teaching and mentoring. This misunderstanding leads to faculty not mentoring students well, or not mentoring at all. If students are to learn how to be successful researchers, having a mentor who can and will guide them through the process is paramount [18].

K. Engebretson et al. challenged the conventional idea of good supervision as a private contract between student and supervisor, preferring more holistic and flexible approaches. In addition, they asserted that successful supervision is core to the research curriculum [8].

F.Kelly focused on advancing dialogue to examine the practice of graduate supervision. She considered conduct within a student/supervisor relationship more broadly and looked at how fictional narratives reveal the manner in which supervision is presented in cultural practices, including the character of supervisor and supervisee. Her findings encourage the use of reflective supervisory practices in doctoral research by both supervisors and students [15].

J. Luca et al. created a toolkit to enhance the support and development of academic staff in their supervisory role. They surveyed experienced supervisors and found there was a clear need for additional support materials to aid their supervision practice. Their emphasis was on the development of a research supervisor toolkit [20].

The relationship between the students and their supervisors is paramount to successful on-time completion. The literature discusses the various aspects of this relationship, with issues directly pertinent to the supervisor being the most prominent element of the discussion (see Figure 2).
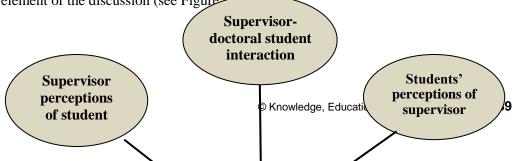

Supervisor-doctoral student interaction

Supervisor perceptions of student

Students' perceptions of supervisor

Figure 1. Issues around the student-supervisor relationship [14]

One, that there is a diminution in supervisory capabilities in most doctoral supervisors today, and while academics have strengthened their abilities to write and publish, they have largely overlooked this fundamental role of mentorship. Further, there is a lack of suitable training available to fill the void. Second, that there is a list of competencies that supervisors can gain, strengthen, and be measured by. N. Hyatt and P. Williams [12, p. 58-60] provide a very good list of competencies based on their research into the issue. Their factors include the following presented in Table 1.

Table 1

Supervisors' competencies in higher degree research supervision

Teaching role competencies	Advising role competencies
1. Communication and facilitation skills 2. Familiarity with theory and practice 3. Use of technology 4. Modeling and teaching ethics 5. Knowledge of and experience with organizational trends 6. Pedagogical understanding 7. Modeling lifelong learning	1. Knowledgeable about research methods, tools, and technologies 2. Guide quality written work 3. Availability to students 4. Student Engagement (as co-researchers) 5. Coaching skills 6. Responsible for dissertation advisement 7. Teaching of research ethics
Research role competencies	**Service role competencies**
1. Able to view issues from multiple perspectives 2. Understand the role of faculty research in teaching and learning 3. Continuous development of scholarly skills 4. Innovative and adaptive 5. Contribute to the field through publications and presentations 6. Understand and promote the role of faculty research to increase program and university prestige 7. Use of technology for research	1. Team and collaboration skills 2. Active in university and professional communities 3. Consultancy skills 4. Ability to work with diverse groups 5. Use of technological skills for service 6. Support the University mission 7. Active in the broader community

While most discussion in articles concerns the student's view of the relationship, these sibling elements of 'Supervisor perceptions of student',

'Supervisor–doctoral student interaction' and 'Student-Supervisor Relationship' have a similar type of influence on the progress and success of a doctoral student [14]. The reason that this primary factor (student's perception) is more important is because perception is reality. The supervisory relationship is likely to make or break the doctoral candidature. A poor relationship with one's doctoral advisor will ruin a good doctoral project regardless of any or all of the other elements which may support it. Therefore, a lot of research and discussion has gone into understanding this relationship, and seeking to improve it, or at least failsafe it. An associated area which receives a lot of empirical attention looks at the factors which lead to selection of a student's 'ideal' supervisor.

S. Ray concluded, that "perhaps the most significant decision a doctoral student makes in the beginning of her research career is the selection of a thesis supervisor. Most often these decisions are in the form of a selection problem from a finite number of choices. The selection is based on a set of criteria, such as professors' reputation, knowledge, and matching of interests among others. However, the application of these criteria in selecting a supervisor is often done in an unplanned manner, which can become one of the reasons for regret, lack of motivation, and poor quality of research output" [25]. The need for having a supervisor who fits well with the students' preferences can hardly be overemphasized. This requires that students should select their supervisor in an objective manner, taking all factors and their own priorities into account.

In a study of the research supervision process for postgraduate students, K. Eggleston and G. Delamont, found that the matching of student to supervisor for effective relationships is crucially important [14]. The question that arises is how this match between student and supervisor can be made. In a doctoral level program, the student chooses a supervisor and has to develop a relationship with this individual. This relationship is different in many ways from the relationships that students have had with the lecturers who delivered most of the courses. For example, research students do need guidance, but they also need to develop sufficient autonomy and freedom to design and execute their own projects [14]. Clearly, there are several qualities that a student expects to see in her research supervisor, all of which may or may not be of equal significance to the student. Consequently, the process of selection of the supervisor becomes one of the critical factors in determining the degree of fit between the student and her supervisor.

In order to address this need of doctoral students, the research by S. Ray aimed to demonstrate the use of analytical hierarchy process (AHP) in the selection of a thesis supervisor. A survey of doctoral students was conducted to obtain a list of criteria that were significant for selection of a research guide and then modeled as an AHP problem. The doctoral students at the authors' institute were asked to list all issues they would consider or recommend one should consider before selecting a thesis supervisor. Table 2 presents the final set of ten key elements after suitably rewording some of the elements and dropping some that conveyed the same meaning.

Table 2

Key elements considered in supervisor selection

Element	Description
Freedom to work	The professor is open to ideas and is flexible about adopting alterative approaches
Time conscious	The professor is conscious about time taken for completion and is generally willing to work towards it
Job prospect	The professors' ability to help the candidate in obtaining a suitable job after completion of dissertation
Convergence of interest	The matching of interest of the student and the professor
Reputation/Subject knowledge/Publications	The reputation of the professor in his or her field.
Personal relationship with the professor	Cordial and understanding relationship with the professor
Social networks	The professors' social network and relationship with other professors in the institute and outside
Can take a stand	The extent to which the professor will support the student in contentious situations, and defend his or her stand once it has been agreed upon previously
Number of thesis guided	Number of thesis guided by the professor, the more the better
Commitment and involvement	Professors' enthusiasm in guiding the thesis, emotional investment

A survey of junior and senior doctoral students was also conducted to ascertain the relative weights of the criteria elements to demonstrate the application of the proposed method.

Table 3

Importance weights of criteria elements in supervisor selection

Criteria elements	Ranks	
	Junior Students	Senior Students
Commitment and Involvement	1	2
Can take a stand	2	1
Reputation/Subject knowledge/Publications	3	5
Time conscious	4	6
Convergence of interest	5	8
Job prospect	5	7
Freedom to work	7	9
Personal relationship with the professor	8	4
Social networks	9	3
Number of thesis guided	10	10

A lot has been said of the impact that a student's perception of his or her supervisor will have on the student's progress and completion. However, the counter view has barely been discussed. The literature confirms the importance of a good

supervisor; it discusses selection criteria that students can use to screen their supervisors for best choice. Therefore, given the clear importance of the supervisor, one must speculate that if the supervisor has a poor perception of the student, then the supervisor's heart and mind may not be invested in the relationship. The supervisor in this situation is not operating at his or her optimum level, as he or she not as fully engaged as he or she could be. More research could be conducted to understand the implications of this scenario, and to explore possible strategies to either prevent it from occurring, or dealing with it if it does arise.

Drawing on the literature and our previous studies, the traditional supervision model is dyadic. There is emerging research which suggests that an alternative model may have benefits. Such an alternative is based on group supervision or cohortbased pedagogies [9]. Group supervision looks at making improvements to the supervision experience by aligning groups of students with groups of supervisors, and so subordinating the direct one-to-one relationship. The strengths of this approach promise increased socialization and supervisory leadership and support, and in some cases, strengthened cross-disciplinary coverage. The benefits of this rather radical approach have not been fully appraised. There is, therefore, scope for universities to experiment with this design and for researchers to evaluate the potential [3].

Conclusions and prospects for further research. Analysis of the literature highlights many occurrences of issues which have been raised and established, but which seem to have been prematurely neglected. Many of these early terminated issues warrant further examination and discussion. These key themes specifically identified the need for professional development in the area of research supervision, the desire of potential or inexperienced supervisors to work with more experienced supervisors, and the need for supervisors to reflect on their own personal experience of being supervised. Furthermore, the research found that it was important for the institution to clearly define the role of supervisors, to provide peer support opportunities and to document protocols to adopt (by students and supervisors) at various stages of a research degree. Findings from the study also contributed to our growing understanding of the principles of threshold concepts in research supervision.

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