CONSTRUCTION OF THE SYSTEM TO JUDGE SUPREVISOR-DOCTORAL STUDENT INTERACTION

Peter Gavora
Tomas Bata University in Zlín

Highlights

- *Research methodology*

Abstract

The knowledge of interaction between a supervisor and doctoral students brings important consequences for research purposes, for supervisor´s evaluation, and for a feedback to a supervisor. In this paper we introduce a descriptive instrument, Inventory of Supervisor Activities, which makes it possible to rate the supervisor´s activities. The instrument concentrates on supervisor´s activities during interaction with a student in three phases of the doctoral studies: before enrolment of the student, during the study and after completion of the study. The system covers 100 activities, which are hierarchically organized, and which make it possible to obtain a rather complex portrayal of the interaction of the supervisor with the doctoral student. This paper is based on the author´s oral presentation at the International Conference of Education, Research and Innovation in Seville, 2014.

Keywords

Doctoral study, doctoral supervisor, supervisor´s interaction, self-rate system

Article type

Full research paper

Article history

Received: May 17, 2015
Received in revised form: June 11, 2015
Accepted: June 20, 2015
Available on-line: June 30, 2015

Gavora P. (2015) "Construction of The System to Judge Supervisor-Doctoral Student Interaction", *Journal on Efficiency and Responsibility in Education and Science, Vol. 8, No. 2*, pp. 44-47, online ISSN 1803-1617, printed ISSN 2336-2375, doi: 10.7160/eriesj.2015.080202.

Introduction

It is generally acknowledged that supervisors have a crucial role in education of doctoral students. Their style as well as the quality and frequency of interaction with doctoral students have a direct influence on the progression trough the doctoral programme and on its successful completion by the student. Though the efforts and time that the supervisor devotes to doctoral students may vary in different phases of their doctoral study, quality interaction with the student is always a precondition for the students' achievement in the programme. This contention has been supported in doctoral studies in a variety of countries, in Sweden (Franke and Arvidsson, 2011), the USA (Barnes and Austin, 2009), Australia (Marsh, Rowe and Martin, 2002), or the Czech Republic and Slovakia (Neusar, Charvát et al., 2012)

Paradoxically, in spite of the vital position of interaction of the supervisor with the doctoral student, very little is known about how this interaction looks like. We have only scarce information what is happening in the supervisor´s office during the supervising process. Thus, supervising can be metaphorised as a black box of which we know the input (characteristics of the supervisor and students) and output (students´ success or attrition, as the case may be) but not what is going on inside. Supervising is a special mode of teaching and teaching, as such, has been recognized for a long time to be a lonely profession (Sarason et al. 1966; Fullan and Hargreaves, 1991). Most of the teacher´s activities are hidden behind the closed door of the classroom. Supervising situations are predominantly individual consultations which take place in the supervisor´s office. It is not quite easy to get inside and observe the process of supervisor-student interaction. Supervising consultations are face-to-face encounters which are private rather than public. Presence of the investigator during these encounters is not welcome by every supervisor; many of them consider it to be violation of privacy. To make matters worse, in order to receive a comprehensive picture of activities used by the supervisor many visits of the researcher to the supervisor´s office must take place to see interaction with a wide array of doctoral students. Gathering sufficient number of these interactions is therefore a tiresome process. Less frequent, but still rather private, are conversations of the supervisor and the doctoral student at conference breaks, during travels to conferences, at social events and the like. These situations are scattered, rather than regular, systematic and planned, and the presence of investigator in them is often difficult to arrange.

What is known about the supervisor work originates from self-reports rather than from direct observation. These reports are based on supervisors´ accounts of their consultation experiences. Empirical evidence on the supervising process has been accumulated by using interviews or questionnaires with supervisors. For instance, Barnes and Austin (2008) organized in-depth interviews with 25 exemplary doctoral supervisors who had graduated a large number of doctoral students about their roles and responsibilities as advisors. In her investigation, Gardner (2010) used interviews which focused on supervisors in regard to their teaching and advising practices, how they perceived successful students, and how they and their departments facilitated the students´ success. Halse (2011) used life history design with 26 supervisors in order to investigate how they learned to become doctoral supervisors.

Through biographical interviews she traced back to uncover their gradually increased expertise in the doctoral supervisions. Similarly, Lee (2008) in interviews with 12 supervisors asked about their past experiences as PhD students, as well as about their current work as supervisors.

Many experienced supervisors published their recommendations related to successful supervising. They suggest steps and procedures that guide a supervisor towards efficient supervising behaviour. For instance, Kristsonis (2008) proposes 42 principles covering broad areas of supervising, such as establishing professional relationship, encouraging the student, managing the student´s time, exerting behaviour like being specific, exact, concise and detailed in all aspects of supervising. Some principles relate to developing of supervisor´s style of supervising, knowing one´s strength, attributes, weaknesses and limitations.

In contrast to recommendation of individual supervisors, many universities developed formal documents, such as guidelines, that supervisors should follow. For instance, Harvard University sets responsibilities of supervisor in three stages of the doctoral study: before enrolment, during the study, and after completion of the programme. As expected, the largest area described is during the learning process; the guidelines distinguish new (first year) and continuing students. This document presents also student´s responsibilities to complement to the supervisor´s (Responsibilities, 2007). Stanford University states 17 specific areas of supervisor´s responsibilities, covering educational, research and intellectual aspects of supervising (Guidelines, 2009). The Trinity College Dublin's postgraduate supervision guidelines delineate the following areas: relationship of the supervisor to the student, supervision of research, student training and development, monitoring student welfare, and supervisory competence. Each of these areas describes recommendations in detail to become a base for supervising processes (Parnell and Prendergast, 2006).

While all these attempts focus on describing efficient supervising, or establishing practical norms for it, some authors´ ambition was to establish a theoretical framework for supervision. Rather than setting the principles of supervisor´s good practices they aim to conceptualize supervision on a theoretical level. For instance Petersen (2007) views the supervision process in broader educational and ideological perspectives. She characterises doctoral education as „academic subjectification", and supervision as a process of 'category boundary work'. Halse and Malfroy (2010) described five facets of "professional work" of the supervisor: (1) learning alliance, or an agreement between supervisor and student to work on a common goal, namely on the production of a high quality doctorate, (2) habits of mind, or the capacity to learn and reflect on the principles for making particular decisions, and to exercise the judgment and disposition to apply these principles in doctoral supervision, (3) scholarly expertise, or deep scientific knowledge of the discipline enabling fruitful participation in the production of knowledge by conducting research, publishing academic articles and/or providing scholarly critiques that impact on thinking or theory, (4) technê, or creative, productive use of expert knowledge to bring something into existence or accomplish a particular objective, and to give an account of what has been produced, and (5) contextual expertise comprises an understanding of the contemporary climate of universities and the 'know-how' to access the infrastructure and resources needed by students.

Design of the Inventory of Supervisor Activities

In the present paper we adopted a specific research strategy to describe the supervisor-doctoral student interaction. Rather than focusing on some selected situations within this interaction we aim to assemble an inventory of all key activities that take place within supervisor-student interchange. We maintain that after such an inventory is completed and field-tested it can be used routinely to describe the profile of supervisor´s interaction with doctoral students. Such an inventory must be well elaborated in order to yield a detailed and well structured picture of supervisor-student interaction.

The primary purpose of this paper is to describe such inventory and explain the manner of its utilisation. The instrument will hereby be referred to as Inventory of Supervisor Activities (ISA). Activity is defined as a purposeful behaviour of the supervisor that aims to elicit specific action of the student and/or it affects the student´s characteristics such as extension of knowledge, skills, change of preferences etc. ISA is composed of a hierarchical system of levels. At the top level, it is organized into three sections covering the three stages of the doctoral study: (1) Activities before enrolment of a student in the doctoral study, (2) Activities in the course of the student´s study, and (3) Activities after completion of the study. Each of the sections consists of individual activities. The total number of activities is 100, and they describe particular characteristics of the interaction (the bottom level of the system).

Section (2), which is the core of the instrument, is, however, more structured; it is divided into 10 subsections which describe groups of activities of similar characteristics (the middle level). Each subsection consists of activities. Sections (1) and (3) have no subsections, they consist of activities only. In other words, ISA structure is imbalanced – Sections (1) and (3), which embody the initial and the final stages of the doctoral study, are represented by activities only, while the Section (2) is first divided into subsections, and then each of the subsections is divided into activities.

The overview of ISA structure is in Table 1. An example of an activity subsection including the descriptions of specific activities is in Table 2. The full form of ISA, including instructions for the use, is available at request from the author (gavora@fhs.utb.cz).

This instrument has been developed from our appraisal of the literature on the supervising process, it is also based on discussions with experienced supervisors, and on author´s own practice in supervising and examining doctoral students. Author´s supervising diaries, which had been written during past supervisions, were also an important source of information in constructing the instrument. The preliminary versions of ISA were discussed with several experienced supervisors and their comments were used to further elaborate on it. The current version is published with the intention of generating ideas on its further development and use.

Four basic principles guided the design of ISA. First, because we concentrate on interaction processes, the inventory comprises only such activities that are manifested, i.e., they are observable. Latent activities, for instance, creating favourable climate, were not included in the inventory.

Second, observable categories are low inference categories, i.e., they do not require much deduction and are easily judged by the user. Low inference categories typically yield higher reliability than high inference categories in observation or self-rating, however, at the expense of omitting some important aspects of

supervisor-student encounters such as climate, satisfaction or endeavour.

SECTION 1 ACTIVITIES OF SUPERVISOR BEFORE ENROLLMENT OF STUDENT IN PhD STUDY
SECTION 2 ACTIVITIES OF SUPERVISOR IN THE COURSE OF STUDENT´S PhD STUDY SUBSECTIONS: 2.1 Introduction to university as institution/workplace 2.2 Organizing and conducting consultations 2.3 Dealing with student´s personal issues 2.4 Supporting student´s self-confidence 2.5 Supporting scientific socialisation of student 2.6 Supporting research 2.7 Supporting dissertation 2.8 Supporting studying/coursework 2.9 Supporting attending workshops/seminars 2.10 Supporting publications
SECTION 3 ACTIVITIES OF SUPERVISOR AFTER COMPLETION OF PhD STUDY

Table 1: Inventory of Supervisor Activities. Overview of sections and subsections

Subsection 2.2: Organizing and conducting consultations	0 = No 1 = Once 2 = Sometimes 3 = Often
2.2.1 Explaining OVERALL aims/ expectations of consultations.	0 - 1 - 2 - 3
2.2.2 Drawing up a schedule (intervals) of regular consultations.	0 - 1 - 2 - 3
2.2.3 Explaining aims of each consultation (usually at the beginning).	0 - 1 - 2 - 3
2.2.4 Explaining responsibilities of student in consultation.	0 - 1 - 2 - 3
2.2.5 Giving feedback on student´s materials/texts provided before or during consultation.	0 - 1 - 2 - 3
2.2.6 Accepting/developing student´s ideas even if in conflict with supervisor´s ones.	0 - 1 - 2 - 3
2.2.7 Responding timely on e-mail request for consultation.	0 - 1 - 2 - 3

Table 2: Extract from ISA: Description of activities within Organizing and conducting consultations subsection

Third, ISA was designed primarily for using as a self-rating instrument. The supervisor judges the occurrence of particular activities in interaction with a doctoral student and marks the particular point in the answer sheet. In addition, ISA can be used for students´ rating of supervisor interaction, thus creating a complementary picture of supervision.

Fourth, the inventory is tailored for supervision in behavioural sciences (education, psychology, sociology). In the present form it cannot be satisfactorily used in supervision in natural sciences such as in chemistry and physics, or in art. By no means has this reduction indicated that other fields or specialisations of supervision are not appropriate for rating in similar inventories. They, however, require inclusion of other knowledge in specific domains which the present author does not possess.

The Use of the Inventory of Supervisor Activities

As concerns the use of ISA, there are rules that should be followed to receive consistent data on supervisor´s interaction. The inventory is a data gathering technique which captures occurrence of activities in question. It records whether a particular activity existed in the practice of a supervisor or not, and how frequently it occurred. The inventory is provided to supervisors with the instruction to self-rate on a four point scale: the activity was not performed, it was performed once, sometimes and often. The inventory does not address the duration and sequence of individual supervising activities, it aims only to capture occurring and frequency. ISA can be used on both paper and electronic formats.

To fill in the inventory, supervisor must have in mind a particular student he/she supervises, not a "general" doctoral student. The aim is to rate the specific activities used with the specific student, rather than making an average picture of supervising interaction. In order to gather most of information, the appropriate student is the one who has completed the PhD programme. In order to create an interaction profile of a supervisor, it is recommended to use ISA for rating interaction with several doctoral students. The number of students depends on the desired accuracy of the assessment results. It should be as high as accurate the generalisation is aimed to be achieved. This is because both supervisors and students expose wide array of personal and academic characteristics which may affect the interaction profile of the supervisor. The interaction profile will show which activities are typically used by the particular supervisor and which are omitted. ISA is a rating system and it cannot provide casual explanations per se. In order to find answers why a supervisor prefers a certain set of activities and omits others one should ask the supervisor in an interview.

This instrument can be used as a research instrument, an evaluation instrument or as a feedback instrument. When using it for research purposes, it can, for instance, compare supervisor´s interaction profile with supervisor´s characteristics such as scientific field, department and university affiliation, gender, age, years of experiences, number of doctoral students in supervising career etc. Another prospective area of research is determination of relationship between interaction profile of supervisor and quality of dissertation of his/her students. However, we do not expect high correlation between these two variables because of many intervening factors. Another research topic is stability and change of the supervisor profile across the supervisor´s career. Is it steady or does it undergo changes? What causes these changes?

While considering results of ISA, we are aware that there may be discrepancy between supervisor´s self-rating of interaction and supervisor´s actual interaction with doctoral students. This is because self-raters can hardly judge their performance and qualities realistically. Deviations can exist on both sides: self-rating is overestimated or underestimated. An important factor influencing teacher´s self-judgement is self-efficacy (Bandura, 2009). Therefore, when comparisons are made, supervisor´s self-concept, professional beliefs and other characteristics should be assessed in addition to self-rating in order to arrive to a comprehensive picture of a supervisor.

When using ISA for evaluation purposes, supervisor´s rating can be compared with students´ rating. Again, we do not expect high

correspondence between the two ratings. Teachers tend to self-rate their interaction higher than their students do. They view their interaction more positively than their students perceive it (den Brok, Levy, Rodriguez, and Wubbels, 2002). Comparison of supervisor´s and students´ ratings of interaction is a good feedback for the supervisor which helps to get a realistic self-image. The supervisor can inspect the differences and analyze the reasons why particular activities were overestimated or underestimated and thus avoid a potential disappointment in supervision. In addition to receiving feedback from students, ISA can be used to compare supervisor´s self-rating with those of colleague-supervisors. Similarities and differences in rating of ISA items can be an important source of knowledge about one´s supervision practices.

Conclusion

How interaction between supervisor and doctoral students is carried out brings important information for research purposes, for supervisor´s evaluation, and for a feedback to a supervisor. In this paper we introduced a descriptive instrument, Inventory of Supervisor Activities, which makes it possible to rate the supervisor´s activities. The instrument concentrates on supervisor activities during interaction with a student in three phases of doctoral studies: before enrolment of the student, during the study and after completion of the study.

This instrument has been field used informally by several supervisors who self-rated themselves. It received favourable appraisal. However, to become a solid device, it requires large-scale implementation and evaluation during which possible weakness and flaws will be revealed and removed. Other direction of development is to expand the content of ISA so that it will cover supervising in disciplines beyond behavioural sciences. ISA uses a four point rating scale. As frequency or intensity of supervisor´s behaviour in interaction is an important factor, other direction of elaboration of ISA is therefore needed towards testing different types of scales.

References

Bandura, A. (2009) *Self-efficacy. The Exercise of Control,* New York: W. H. Freeman and Comp. ISBN 0-7167-2850-8

Barnes, B. J. and Austin, A. E. (2009) ´The Role of Doctoral Advisors: A Look at Advising from the Advisor's Perspective´, *Innovative Higher Education*, vol. 33, no. 5, pp. 297-315. http://dx.doi.org/10.1007/s10755-008-9084-x

den Brok, P. J., Levy, J., Rodriguez, R. and Wubbels, Th. (2002) ´Perceptions of Asian–American and Hispanic–American Teachers and their Students on Interpersonal Communication Style´, *Teaching and Teacher Education*, vol. 18, no 4, pp. 447–467. . http://dx.doi.org/10.1016/S0742-051X(02)00009-4

Franke, A. and Arvidsson, B. (2011) ´Research supervisors' different ways of experiencing supervision of doctoral students´, *Studies in Higher Education,* vol. 36, no. 1, pp. 7–19. http://dx.doi.org/10.1080/03075070903402151

Fullan, M. G. and Hargreaves, A. (1991) *What´s Worth Fighting for? Working Together in Your School,* Toronto: Ontario Public School Teachers´ Federation. ISBN 1-878234-02-1

Gardner, S. K. (2010) ´Faculty Perspectives on Doctoral Student Socialization in Five Disciplines´, *International Journal of Doctoral Studies*, vol. 5, pp. 39-52.

Guidelines for Advising Relationships between Faculty Advisors and Graduate Students (2009), Stanford University, Office of Graduate Studies. Retrieved on Oct. 21, 2014 from www.vpge.stanford.edu/advisor-guidelines.pdf

Halse, Ch. (2011) 'Becoming a Supervisor: The Impact of Doctoral Supervision on Supervisors' Learning´, *Studies in Higher Education*, vol. 36, no. 5, pp. 557–570. http://dx.doi.org/10.1080/03075079.2011.594593

Halse, Ch. and Malfroy, J. (2010) ´Re-theorizing Doctoral Supervision as Professional Work´, *Studies in Higher Education*, vol. 35, no. 1, pp. 79–92. http://dx.doi.org/10.1080/03075070902906798

Kristsonis, W. A. (2008) ´Functions for the Doctoral Dissertation Advisor. Focus on Colleges´, *Universities and Schools*, vol. 2, no.1, pp. 1-6.

Lee, A. (2008) ´How Are Doctoral Students Supervised? Concepts of Doctoral Research Supervision´, *Studies in Higher Education*, vol. 33, no. 3, pp. 267–281. http://dx.doi.org/10.1080/03075070802049202

Marsh, H. W., Rowe, K. J. and Martin, A. (2002) PhD Students´ Evaluations of Research Supervision´, *The Journal of Higher Education,* vol. 73, no. 3, pp. 313-348. http://dx.doi.org/10.1353/jhe.2002.0028

Neusar, A., Charvát, M. et al. (2012) *PhD existence v oboru psychologie v České republice a na Slovensku,* Olomouc: Filozofická fakulta. ISBN 978-80-244-3158-1

Parnell, J. and Prendergast, P. J. (2006) ´Postgraduate Supervision: Best Practice Guidelines on Research Supervision for Academic Staff and Students´, Retrieved on May 7, 2015 from http://www.tcd.ie/Graduate_Studies/docs/Supervison%20Guidelines.pdf.

Petersen, E. B. (2007) ´Negotiating Academicity: Postgraduate Research Supervision as Category Boundary Work ´, *Studies in Higher Education*, vol. 32, no. 4, pp. 475–487. http://dx.doi.org/10.1080/03075070701476167

Responsibilities of the Advisor (2007) Harvard University, Harvard School of Public Health. Retrieved on Oct. 21, 2014 from www.hsph.harvard.edu/educational-programs/advising students#responsibilites of the advisor

Sarason, S.B., Levine, M., Goldenberg, I., Cherlin, D. and Bennett, E. (1966) *Psychology in Community Settings: Clinical, Educational, Vocational, Social Aspects,* New York: John Wiley and Son.