

# Pakistan Social Sciences Review www.pssr.org.pk

## RESEARCH PAPER

## Research Guidance Experiences, Expectations and Perceived Learning Outcomes of University Students in Pakistan

Dr. Muhammad Riaz<sup>1</sup> Dr. Muhammad Naeem Ashraf<sup>2</sup> Muhammad Afzal Butt<sup>3</sup>

- 1. Assistant Professor, Department of Education, Government Degree College (Boys) Khurrianwala, Faisalabad, Punjab, Pakistan
- 2. Assistant Professor, Department of Education (Government Postgraduate College Samundri, Faisalabad, Punjab, Pakistan
- 3. Associate Professor, Department of Political Science, GC Women University Sialkot, Pakistan

PAPER INFO	ABSTRACT
Received: April 12, 2020 Accepted: June 15, 2020 Online: June 30, 2020	The completion of research process principally depends upon the relationship of students and their supervisors. The study recognizes students' perceptions about their supervisors' mentoring skills. This study explores the research experiences of PhD Scholars and determines their relationships with the supervisors. The population of the study involves five Public
Keywords: Scholarly Guidance, Supervision, Higher Education	Sector Universities of Punjab and sample consists of 100 PhD Scholars in social sciences, 20 from each university. A self-developed five point liker scale was applied as an instrument to collect data from respondents. The validity of the tool was insured and reliability was affirmed through Cronbach Alpha. Data were
Corresponding Author: riaz2714@gmail.c om	analyzed through SPSS; ANOVA was applied to conclude the results. The outcomes of the study revealed that students were facilitated with proper guidance during research work. The study suggests that Universities should set a framework for meetings by fixing time for the researcher on regular basis to insure the provision of scholarly guidance

## Introduction

Supervision in research is way to advise, encourage, motivate, stimulate and guide the research scholars in order to successful completion of tasks within the specified timeframe. The valuable and effective supervision depends upon the knowledge and research skills of the supervisors. A good supervisory skill establishes quality relations which can promote and lead their students to access knowledge and research skills. The students develop great expectations from their supervisors especially in the field of research. They wish that their supervisors should be supportive, helpful and compassionate in good and bad times. The research students are also responsible for their own learning to get PhD. They are accountable for maintaining what is mandatory for moving it out and should keep them engaged with

their supervisors on regular basis. Supervisors have also some expectations from their students to be conscious, hardworking, regular and well aware towards their responsibilities in pleasant working environment.

The research student is held responsible for his/her research work. Earning PhD undoubtedly clarifies that this is a student's own research work. Therefore they should submit his/her draft well in time so that writing errors and mistakes can be established and corrected. A good research student supposes to have deep understanding of under taking research work. The professional development involves participating in conferences, developing research papers for publishing and approaching to attend workshops and seminars related to research activities. The students and their research supervisors both are responsible for successful completion of PhD degrees however both should develop an active and effective relationship during this period. This relationship can be viewed as personal and professional connection obviously depends upon the personal characteristics of individuals involved in that association. In this relationship, supervisor helps a research scholar in selecting a research topic, developing a research framework, locating and establishing appropriate resources, arranging, conducting and analyzing the whole process. Therefore this process demands regular contact and adjustments. Moreover a Good communication between student and supervisor is a key element through entire research process. Furthermore without honest and cordial associations of students and research supervisors it will be difficult to handle shortfalls. The situation can be much pleasant if both parties are ready to listen and accommodate each other's, by leaving personality clashes and all other barriers. Doing a PhD degree is hectic and difficult task while a good supervisor cooperates with his research students in order to achieve the desired objectives.

#### Literature Review

The importance of research work is always acknowledged by the research scholars. The research scholars who are conducting research work need supervisors with whom they can work to complete their research projects smoothly and successfully (Holloway ad Walker, 2000). Hockey (1994) mentioned that research guidance is the most important element in conducting and completing the whole process. Heath (2002) defined that research supervisor is person who is responsible to provide proper time, adequate guidance and appropriate support to students in developing research skills among them. Denicolo (2004) mentioned and ranked some positive attributes regarding the role of supervisors about the understanding and judgment of the research scholars, as they are encouraging and supportive, informative and well informed, reliable and sharing. Mainhard et al., (2009) clarified and established abilities and qualities of research supervisors such as having communicating skills, providing support and timely feedback to research scholars, needing caring attitude, developing intimacy and understandings.

Wright and Lodwick, (1989) viewed the role of supervisor has been acknowledged vital importance to research scholars as he is a key source of

information, guidance and assistance (Sheehan, 1993 and Salmon et al., 1997) and similar findings was observed in study (Holloway and Walker, 2000). Supervision is a dynamic process good supervision includes providing proper amount of support counseling and encouragement. An appropriate feedback, constructive and critical appraisal from supervisor develops independent thinking in doctorial research fellows (Sheehan, 1993). Ismail et al. (2007) in their study viewed that Supervision has two important functions in research process; supportive and communicative. MacNeil (2004) noted that support from supervisor is often concerned to provide encouragement and opportunities to develop research practices in an organization (Noe, 1986), while in the context of training research supervisor stimulates and encourages researchers to participate in training programs help them before and after the completion training program (Tai, 2006).

The expectation of students as well as their supervisors can often vary; hence it is a bit difficult to develop balance in a right direction which can satisfy the students and supervisors. Sheehan (1993) describes that the scholars and their research supervisors can construct different hopes from each other in a dissimilar manner. Nevertheless problems relating to supervision can be handled and reduced if students and supervisors develop an agreed framework of their desires, tasks and responsibilities by developing working relationships was observed in study (Thompson et al., 2005). Various researches have been carried out to determine the abilities of a supervisor (Wisker et al., 2003) hence it is not a model in itself whereas it focuses that flexibility in behavior and emotional stability can show an active part in working with research scholars through the productive accomplishment. Taylor et al., (2019) report that there are several imperial evidences that the lack of emotional intelligence divergence in working style leads towards poor rate of completion .The role of the supervisor in research process is critical and significant and it has a great impact on the success of any research related activity. The research a scholar and his supervisor inter action is complex and versatile in different direction when each person has particular expectations of others (Noe, 1986; Blanchard and Thacker, 2007).

Golde (2000) concludes that special focus is given to students who complete these degrees of Doctoring. He suggests that a lot more information can be obtained from the scholars who leave these research programs. Sayed et al., (1998) noted, Lack of methodological skills and isolation are two most cited problems which stresses upon the need both social and academic while academic resources were central (Haksever and Manisali (2000). One of the major reasons behind students leaving program is non cooperation between students and supervisor and lack of guidance (Sayed et al., 1998). Haksever and Manisali (2000) say that most frequent supervision is noted a successful completion of programs. There are some other reasons of failure of scholars not completing their degrees, which are thesis academic writing, part time enrolment and demanding professional career and other priorities isolation chilly climate for women family commitment, finance and problems (Sayed et al., 1998). Gurr, (2001) points out that in the process of giving autonomy to the students; tensions have been seen within the supervisory relationship. To what extent should they work

and how much should they depend upon their research supervisors (Delamont et al., 2000). The stress is related to differences of disciplines and stages that student has reached in his research (Wright and Lodwick, 1989) moreover the tensions still prevail if student and the supervisor have the conflict in opinion (Dawson, 1996; Lee, 1998). One conflict that needs to be resolved is to what degree support should be given from supervisors to students to carryout learning moreover satisfaction is also to be ensured on both sides students as well as supervisors (Haksever and Manisali, 2000; Heath, 2002).

Doctoral research is selected to so many measures of research outcomes. The responsibility of in time Doctoral completion lies both on scholar and supervisor (Hockey 1994; Sayed et al., 1998). Both should play their role in a good manner during stipulated period of time (Hockey 1994; Sayed et al., 1998). The relationship is based on the qualities of persons involved. The relationship between student and supervisor revolves around certain things such as selection of research problem locating and identifying appropriate resources handling actively the research process, scanning the previous research studies conducting data analysis and interpretation, dissimilating and defining results, defending results and chances of publication. The relationship between two persons requires proper adjustment great care and interpersonal skills (Hockey, 1994).

A number of researchers concluded that the most important element in supervision is good communication skills between students and their supervisors (Haksever and Manisali, 2000). Open and true communication is very essential to handle the difficulties or short falls perceived by students (Hockey, 1994; Salmon et al., 1997). A positive and constructive criticism open to listen each other point of view enhances the success of completion. According to Delamont et al. (2000), several research studies pointed out that personality factors are involved in relationship such as contrast in personalities, age differences, cultural barberries or language and style of working.

Evans (2002) describes that the difficulties in supervision can develop in any time throughout the research process. The most general and common problem is be sometimes over or under controlled and supervised that may have distinctive approaches of thinking and working styles, therefor clashes may arise between personalities (Thompson et al., 2005). A good relationship undoubtedly leads towards success and avoids most of difficulties while poor relationships obviously develop disaster and end in shape of demoralization as well as depression. It may even results in disappointment to complete research work (Holloway and Walker, 2000). Thompson et al. (2005) suggest that an easier technique to sustain progress in research work is to develop good supervisory connection and it should be consistent and regular. Supervisory meetings are considered to be the core of research work/process. Students should always confirm their appointment with their supervisors if any printed work is to be checked and discussed. The students should make it sure that they have submitted their written work to supervisors in advance, letting them enough spell of time for reading and commenting on the said work. Nevertheless there should

be a decided plan of action to avoid any misunderstandings and further complication. Holloway and Walker (2000) mentioned that Students have certain expectations from their supervisors however these expectations should be reasonable and appropriate (Thompson et al, 2005). The basic practice behind this research paper is to bring an overview of important features about research supervision specifically to observe the relationships of research scholars with their supervisors. The paper intended at students' perception regarding provision of scholarly guidance in research process and how to avoid supervisory problems. The objectives focused in the study were to 1) identify the role of supervisor in the accomplishment of research work, 2) assess the guidance provided by supervisor and 3) identify relationship between supervisor and researcher.

#### **Material and Methods**

The descriptive type study adopted a quantitative interpretive methodology to draw conclusion. The researchers adopted survey model to collect data from the respondents. The population regarding the study comprised of five Public Sector Universities of the Punjab province. Among them Government College University Faisalabad referred as GCUF, University of Sargodha mentioned as UOS, Baha-ud-din Zakariya University Multan described as BZU, Islamic University Bahawalpur IUB and University of Education Lahore as UOE. Sample of the study consisted of 100 PhD research scholars in social sciences, 20 from each university.

#### Instrumentation

The researchers used a self-developed instrument similar as five point Likert type scale to identify students' expectations from their supervisors towards research work. There were three indicators and twenty statements of instrument for students to record their perception regarding the provision scholarly guidance.

## Validity of the Instrument

Validation is one of most important aspect of research tool. The panel of experts in the field was requested to refine the items for the intention of validation. Validation of tool was confirmed through three point ranking levels, most appropriate, appropriate and less appropriate. There were 37 items in the research instrument; the value of each item was calculated. The mean score of 17 items were recorded less than two however those items were excluded from the final instrument.

## Reliability of the Research Scale

The reliability of data was checked through statistical measures by using the Cronbach's Coefficient Alpha. Fifteen respondents from Government College University, Faisalabad (GCUF) were taken to determine the reliability of scale through pilot testing .The result demonstrated reliability coefficient was 0.89.

### **Results and Discussion**

The mean achievement score along with standard deviation of each statement and indicator of the scale was calculated to draw descriptive results. Moreover in inferential section, the analysis of variance was also generated to point out the difference of opinion regarding responses in universities.

Descriptive analysis regarding provision of Guidance

Sr.	Statements	N	Mean	Std. Deviation
1	Provides guidance regarding selection of topic	100	3.96	1.39
2	Assists the candidate to develop a research proposal	100	2.46	1.53
3	Provides guidance about relevant literature and other sources	100	2.40	1.51
4	Clarifies rules and regulations regarding research work	100	3.72	1.24
5	Provides assistance according to the requirements of student	100	2.06	1.28
6	Helps the researcher to solve difficulties regarding research work	100	2.87	1.70
7	Provides constructive and timely feedback on drafts	100	3.73	1.46
8	Assists in preparation of work for publication	100	3.52	1.27
9	Assists the candidate to defend their research work	100	2.43	1.35
	Overall	100	3.02	1.37

The above table demonstrates cumulative mean and standard deviation regarding the provision of guidance in research work from the supervisors. The mean score and standard deviation (M 3.02, SD 1.372) indicated the respondents had not demonstrated about their opinion clearly about provision of guidance facilities in research work.

Table2
Descriptive analysis regarding Motivation

Sr.	Statements	N	Mean	Std. Deviation
1	Motivates to complete research work within framework	100	3.45	1.35
2	Monitors performance of the candidate in research work	100	2.39	1.49
3	Promotes research attitude in the researcher	100	3.66	1.47
4	Motivates the candidate to play an active role in intellectual life	100	3.51	1.34

## Research Guidance Experiences, Expectations and Perceived Learning Outcomes of University Students in Pakistan

5	Provides access towards research projects	100	3.74	1.25
6	Introduces novel ideas regarding your research work	100	3.37	1.33
	Overall	100	3.35	1.34

The above table demonstrates cumulative mean and standard deviation regarding the provision of motivation in research work from their supervisors. The mean score and standard deviation (M 3.35, SD 1.341) indicated the respondents were satisfied about motivational behavior of their supervisors in research work.

Table 3
Descriptive analysis regarding Co-operation

Sr.	Statements	N	Mean	Std. Deviation
1	Provides cooperation in the development of critical thinking	100	3.87	1.24
2	Communicates with researcher on regular basis	100	3.58	1.47
3	Friendly environment is provided by the supervisor	100	2.44	1.58
4	Frequently meetings are allowed to discuss research work	100	3.53	1.34
5	Facilitates meetings of the candidate with other researchers in the relevant field	100	3.70	1.48
	Overall	100	3.42	1.423

The above table demonstrates cumulative mean and standard deviation about extending cooperation in their research work from the supervisors. The mean score and standard deviation (M 3.42, SD 1.423) indicated the respondents admitted that their supervisors were cooperated.

Table 4
Comparison of responses among Universities

		Mean	Std. Deviation	P-value
	GCUF	2.26	1.42	
	UOS	3.32	0.97	-
Guidance	IUB	2.78	1.03	0.012
Guidance	BZU	3.15	1.17	-
	UOE	3.61	1.54	
	Mean	3.02	1.26	
	GCUF	2.50	1.52	
Motivation	UOS	3.71	0.87	0.011
	IUB	3.23	1.07	0.011
	BZU	3.48	1.25	-
	UOE	3.83	1.59	-

	Mean	3.35	1.30	
-	GCUF	3.16	1.94	
	UOS	4.74	1.17	
Relationship	IUB	4.09	1.37	
Relationship	BZU	4.50	1.51	0.007
	UOE	4.88	1.95	
	Mean	4.28	1.65	

Table 4 indicated comparison of data among five Public Sector Universities. Overall means of guidance facilities were UOE (3.61), UOS (3.32) and BZU (3.15) respectively, which showed satisfaction regarding provision of guidance in research work from their supervisors. Mean scores of GCUF (2.26) and IBU (2.78) show that students were dissatisfied with guidance facilities while overall mean of all universities did not clarify the trend of responses. Moreover the P value of this component is 0.012 which is highly significant.

Overall mean of motivational level in GCUF (2.5) which showed less of inspiration from supervisors. Mean scores of UOE 3.83, UOS 3.71 BZU 3.48 and IUB 3.23 which showed high motivational inspiration from their supervisors while overall mean of all universities showed the trend of responses towards convenience of motivation from their supervisors. Furthermore the P value of this component is 0.011 which is highly significant.

Over all mean of all universities regarding relationship between researchers and supervisors is found pleasant and friendly. P value of this component is 0.007 which is highly significant.

Table 5
Post Hoc Tests of Multiple Comparisons Hochberg'GT2among Universities regarding Guidance.

Variable	Universities	N	Mean	Std. Deviation	P		
	UOS	20	3.83	1.59	.004**		
Guidance	BZU	20	3.35	1.30	.023*		
	UOE	20	3.16	1.94	.002**		

<sup>\*</sup>P<0.05, \*\*P<0.005

The above table indicates the post hoc test among universities, Government College University Faisalabad (GCUF), University of Sargodha (UOS), Baha-ud-din Zakariya University (BZU) Multan, Islamic University Bahawalpur (IBU) and University of Education (UOE) Lahore regarding guidance, motivation and relationship and their significance difference from each other. The above table describes the exact difference among universities regarding guidance. The mean achievement score and standard deviation calculations of participants from University of Sargodha were (M = 3.83, SD = 1.59), p = .004), participants from Baha-ud-din Zakariya University were (M = 3.35, SD = 1.30, p = .023) and participants from

University of Education were (M = 3.16, SD = 1.94), p = .002), which was significant at the level of p<0.005 and p<0.05. The results revealed that participants from University of Sargodha, Baha-ud-din Zakariya University and University of Education experienced more guidance from their supervisors as compared to the participants from other universities.

Table 6
Post Hoc Tests of Multiple Comparisons Hochberg'GT2among Universities regarding Motivation.

Variable	Universities	N	Mean	Std. Deviation	P		
	UOS	20	4.74	1.17	.002**		
Motivation	BZU	20	4.09	1.37	.016*		
	UOE	20	4.50	1.51	.003**		

<sup>\*</sup>P<0.05, \*\*P<0.005

The above table describes the exact difference among universities regarding motivation. The mean achievement score and standard deviation calculations of participants from University of Sargodha were (M = 4.74, SD = 1.17), p = .002), participants from Baha-ud-din Zakariya University were (M = 4.09, SD = 1.37, p = .016) and participants from University of Education were (M = 4.50, SD = 1.51), p = .003), which was significant at the level of p<0.005 and p<0.05. The results revealed that participants from University of Sargodha, Baha-ud-din Zakariya University and University of Education adept more motivation from their supervisors as compared to the participants from other universities.

Table 7
Post Hoc Tests of Multiple Comparisons Hochberg'GT2among Universities regarding Relationship

Variable	Universities	N	Mean	Std. Deviation	P
Relationship	UOS	20	4.88	1.95	.001**
	UOE	20	4.28	1.65	.002**

<sup>\*\*</sup>P<0.005

The above table describes the exact difference among universities regarding cooperation. The mean achievement score and standard deviation calculations of participants from University of Sargodha were (M = 4.88, SD = 1.95), p = .001) and participants from University of Education were (M = 4.28, SD = 1.65), p = .002), which was significant at the level of p<0.005. The results revealed that participants from University of Sargodha and University of Education practiced more cooperation from their supervisors as compared to the participants from other universities.

Table 8
Comparison of Gender regarding Guidance, Motivation and Relationship

		0	,	<u> </u>
Variable	Gender	Mean	Std. Deviation	P-value
	Male	3.16	1.25	
Guidance	Female	2.94	1.27	0.422
	Male	3.46	1.37	
Motivation	Female	3.30	1.26	0.560
Relationship	Male	4.47	1.57	- 0.396
	Female	4.18	1.69	- 0.390

Table 8 indicates gender wise comparison of respondents regarding guidance motivation and cooperation between supervisors and researchers. The calculations of data revealed insignificant difference between male and female furthermore both genders of respondents show their trends towards availability of guidance, motivation and friendly relationship between researchers and their supervisors.

#### Conclusion

The study demonstrated about students' perceptions regarding supervisory skills. Majority of the respondents were satisfied and they admitted that supervisors provided proper guidance regarding selection of topics, solved difficulties, gave constructive feedback and guided in preparation of work for publishing whereas it was also observed that supervisors provided adequate help to develop research proposal, locate relevant literature and clarifies rules and regulations regarding research work. The respondents revealed that supervisors helped to promote research attitude in researchers. They played an active role in their intellectual life by providing access toward research projects. The respondents potently acknowledged the significant role of supervisors in developing novel ideas moreover it was also noted that supervisors took keen interest in completing research work within time frame work. The opinion of the respondents revealed that supervisors extended sense of cooperation in developing critical thinking, they communicated with the researchers on regular bases. Moreover frequently meetings were arranged in friendly environment to discuss problems regarding research work.

The study revealed that university students were pleased with their research supervisors regarding positive relationship and time management skills. The problems and issues arise when time is not properly managed among research scholars and supervisors. Therefore each and every body suffers due to lack of coordination and time management. The results of the study were consistent with the findings of research articles (Gurr, 2001). A research study also mentioned that students expressed

their grievances for the negativity of their supervisors, communication at the initial stage of their doctoral degree (Wisker et al., 2010). The findings of related studies suggested that developing positive communication skills, giving constructive feedback may affect research scholars regarding their academic achievements and keep motivational level high, enhancing confidence, and decreasing stress and anxiety. Majority of respondents revealed that supervisors help to promote research attitude in researchers and to motivate researchers for an active role in intellectual life. The findings from this study were also consistent with findings of Brew & Peseta, (2004) they concluded that supervisors provide motivation to their research scholars.

#### Recommendations

- It is recommend that supervisors should provide constructive and timely feed back to researcher on his research draft.
- Universities should set framework for frequently meetings between researcher and supervisor. Time should be fixing for the researcher on regular basis.
- Academic burden on supervisor should be relaxed so that he can fully concentrate on solving difficulties of the researcher.
- Supervisor should provide friendly environment to researcher so that he can share his problems and confusions regarding research work.
- Supervisor should give proper guideline for publication and provide access toward research projects

#### References

- Blanchard, P. N., Thacker, J. W. (2007). *Effective training: systems, strategies, and practices*. USA: Pearson Prentice-Hall.
- Brew, A. & Peseta, T. (2004). Changing Postgraduate Supervision Practice: A Programme to Encourage Learning through Reflection and Feedback. *Innovation in Education and Teaching International*. 41(1), 5-22.
- Dawson, V. (1996). The (R) Evolution of my Epistemology: my experience as a postgraduate research student. *Educational Action Research*, 4(3), 363-374.
- Delamont, S., Atkinson, P., & Parry, O. (2000). The doctoral experience: success and failure in graduate school (London, & New York, Falmer Press).
- Denicolo, P. (2004). Doctoral supervision of colleagues: Peeling off the veneer of satisfaction and competence. *Studies in Higher Education*, 29(6), 693-707.
- Evans, T. (2002). Part-time research students: are they producing knowledge where it counts? *Higher Education Research & Development*, 21(2), 155-165.
- Golde, C. M. (2000). Should I stay or should I go? Student descriptions of the doctoral attrition
- Gurr, G. M. (2001). Negotiating the Rackety Bridge Adynamic model for aligning supervisory style with research student development. *Higher Education Research & Development*, 20(1), 81-92.
- Haksever, A. M., & Manisali, E. (2000). Assessing supervision requirements of PhD students: The case of construction management and engineering in the UK. *European Journal of Engineering Education*, 25(1), 19-32.
- Heath, T. (2002). A quantitative analysis of PhD students' views of supervision. *Higher Education Research & Development*, 21(1), 41-53.
- Hockey, J. (1994). New Territory: Problems of adjusting to the first year of a social science PhD. *Studies in Higher Education*, 19(2), 177-190.
- Holloway, I., & Walker, J. (2000). Getting a PhD in Health and social care Blackwell Science Ltd, Oxford.
- Ismail, A., Chandra Segaran, S. C., Cheekiong, T., & Ong, G. (2007, December). The mediating role of motivation to learn in the relationship between supervisors's role and job performance. *In The Sixth Asian Conference of the Academy of HRD*, Dec 3-5, 2007, Beijing, China.

- Lee, D. (1998). Sexual harassment in PhD supervision. *Gender and Education*, 10(3), 299-312.
- MacNeil, C. M. (2004). Exploring the supervisor role as a facilitator of knowledge sharing in teams. *Journal of European Industrial Training*, 28(1), 93-102.
- Mainhard, T., Van Der Rijst, R., Van Tartwijk, J., & Wubbels, T. (2009). A model for the supervisor–doctoral student relationship. *Higher education*, *58*(3), 359-373.
- Noe, R. A. (1986). Trainees' attributes and attitudes: Neglected influences on training effectiveness. *Academy of management review*, 11(4), 736-749.
- Salmon, P., Finn, J. A., Wisker, G., Taylor, S., & Sternberg, D. (1997). PhD supervision: a guide for students and supervisors/Rochelle Christian... (et al.).
- Sayed, Y., Kruss, G., & Badat, S. (1998). Students' experience of postgraduate supervision at the University of the Western Cape. *Journal of Further and Higher Education*, 22(3), 275-285.
- Sheehan, J. (1993). Issues in the supervision of postgraduate research students in nursing. *Journal of Advanced Nursing*, 18(6), 880-885.
- Tai, W. T. (2006). Effects of training framing, general self-efficacy and training motivation on trainees' training effectiveness. *Personnel review*, 35(1), 51-65.
- Taylor, S., Kiley, M., & Humphrey, R. (2019). *A handbook for doctoral supervisors*. Routledge, Abingdon.
- Thompson, D. R., Kirkman, S., Watson, R., & Stewart, S. (2005). Improving research supervision in nursing. *Nurse Education Today*, 25(4), 283-290.
- Wisker, G., Morris, C., Cheng, M., Masika, R., Warnes, M., Trafford, V., & Lilly, J. (2010). Doctoral learning journeys: Final report. *Higher Education Academy*.
- Wisker, G., Robinson, G., Trafford, V., Lilly, J., & Warnes, M. (2003). Supporting postgraduate student learning through supervisory practices. *Improving Student Learning: Theory Research and Scholarship*.
- Wright, J., & Lodwick, R. (1989). The process of the PhD: a study of the first year of doctoral study. *Research Papers in Education*, 4(1), 22-56.