Educational Quest: An Int. J. of Education and Applied Social Sciences: Vol. 15, No. 02, pp. 41-49, August 2024
DOI: 10.30954/2230-7311.2.2024.1
Peer Reviewed Journal

Strategic Partnering for Dissertation Development

Matasha MurrellJones[1*] and Imani Akin[2]

[1]Business, University of Phoenix, USA
[2]Education, University of Phoenix, USA

*Corresponding author: mmurrell@email.phoenix.edu

Received: 11-05-2024 **Revised:** 23-07-2024 **Accepted:** 02-08-2024

ABSTRACT

Doctoral degree candidates struggle to successfully complete their degree program. The problem is that doctoral students are able to successfully complete their coursework, but not the research study that is necessary to earn their doctorate degree. Adequate support is needed to assist the doctoral candidate with attaining their goal of degree completion. Data for this study identified strategies and created a potential model for mentorship. The theoretical framework included Kram's theory of mentorship and Knowle's theory of Andragogy. The research question and hypothesis addressed the personal experiences of doctoral candidates as it relates to their relationship with their doctoral mentors. This quantitative correlational research study used a Likert-type scale. The data resulted in a proposed model for the successful relationship between the candidate and chair. Conducting this research aided in developing a model of support that the chair and candidate can use to create a process for working to develop the dissertation. This study can impact society by providing a model of support for partnerships in education and other industries as well.

Keywords: Mentorship, doctoral attrition, doctoral persistence, doctoral academic support, doctoral emotional and social support, mentorship strategies

Strategic Partnering for Dissertation Development

Attrition from doctoral programs has consistently remained high over the last 50 years in the USA, even with the introduction of new programs and opportunities for success. Approximately 50% of all doctoral students drop out of their programs before completion (Lafrance *et al.* 2020; MELS, 2012; Shavers & Moore, 2014). Research in the area of the attrition of the doctoral learner has primarily focused on the doctoral experience from the perspectives of the completion and attrition rates, time to degree, socialization processes, dissertation logistics, supervisory roles and relationships, gender and race, and disciplinary differences (Gardner, 2009; Maul *et al.* 2018; Volkeert *et al.* 2018).

The broad problem is that doctoral students complete the coursework, but not the dissertation necessary to earn their doctorate degree (Gardner, 2008). Attrition rates of doctoral candidates across the USA is around 50% across disciplines (Allum, 2014; Council of Graduate Schools, 2008). The specific problem is that doctoral students struggle to complete their doctoral program without adequate support from their Dissertation Chair in the USA (Anekstein & Vereen, 2018; Duffy *et al.* 2018; Esposito *et al.* 2017). The relationship between the Chair and candidate may impact the success and effectiveness of doctoral research completion (Black, 2017; Leijen *et al.* 2016; Litalien & Guay, 2015; Orellana *et al.* 2016; Roberts, 2020).

Purpose of the Study

The Chair and candidate relationship impacts the

How to cite this article: MurrellJones, M. and Akin, I. (2024). Strategic Partnering for Dissertation Development. *Educational Quest: An Int. J. Edu. Appl. Soc. Sci.*, **15**(02): 41-49.

Source of Support: None; **Conflict of Interest:** None

emotions, well-being, and success of the doctoral candidate (Burrington *et al.* 2020; Hunter & Devine, 2017; Kent *et al.* 2020). The purpose of this study is to determine if the relationship perceived by the doctoral Candidate, between the Chair and Candidate, significantly contributed to the candidate's successful completion of their doctoral degree, in an effort to find effective tools, models, and strategies to build the relationship between the Chair and the Candidate to enhance the doctoral candidate's research experience.

Research Question

RQ1: Does the Dissertation chair and Dissertation candidate relationship impact the doctoral learner successfully completing their research program as measured by the Strategic Partnership Scale (SPS) in a statistically significant way?

$H1_0$: The Dissertation chair and the Dissertation candidate relationship does contribute to the Doctoral candidate successfully completing the doctoral program in a statistically significant way as measured by the Strategic Partnership Scale (SPS).

$H1_A$: The Dissertation chair and the Dissertation candidate relationship does not contribute to the Dissertation candidate successfully completing the doctoral program in a statistically significant way as measured by the Strategic Partnership Scale (SPS).

Research Methodology

This study used a quantitative research method. A quantitative instrument, the Strategic Partnership Scale (SPS), a Likert-type survey, was used to measure the relationship between the doctoral chair and candidate. The survey instrument was created using items adapted from Kram's mentor theory (1983), Knowles' Andragogy theory (1984), and the Mentorship Effectiveness scale by Berk *et al.* (2005). The first part of the SPS instrument is a 17 statement Likert-type survey using a scale from 0 to 6. The scale levels include: 0 Strongly Disagree (SD), 1 Disagree (D), 2 Slightly Disagree (SLD), 3 Slightly Agree (SLA), 4 Agree (A), 5 Strongly Agree (SA), and 6 Not Applicable (NA). The second part of the SPS instrument asks participants to select and rank the various strategies and mentorship relationship criteria. The survey was distributed using Google Docs.

In order to establish face value, the survey instrument was reviewed by professionals in education, who attained 3 to 5 years of experience in the field of education, worked in a Doctoral program either currently or previously, had expertise in research, and were not a current Doctoral Candidate. 5 experts completed the survey and the results led to minor changes being made to the survey instrument. The correlational research design used for this study was appropriate because it enabled statistical tests to be used as a measure (Katz, 2003). The dependent variables were the doctoral candidate and the successful completion of the doctoral program. The independent variable was the doctoral chair and candidate relationship, which influences or has an effect on the dependent variables, the doctoral candidate, and the successful completion of the doctoral program. The authors received IRB approval to conduct the study on behalf of the University of Phoenix.

Theoretical Framework

The relationship between the candidate and their chair can be critical for the success of completion of the dissertation. The candidate and chair relationship can be defined as "a developmental relationship in which a more advanced or experienced person (the Chair) is committed to providing career and/or personal support to another individual (the candidate)" (Eby *et al.* 2000). Eby *et al.* (2000) found that 53.8% of mentees located at a south-eastern university (N = 156) reported a negative relationship with their mentor (chair). The impact of a negative relationship between the mentor (chair) and mentee (candidate) can have serious detriments to the health and success of the mentee (Eby *et al.* 2000; Eby & Allen, 2002).

There is a need to identify clear expectations and roles both the chair and candidate early on and continuously throughout a doctoral program (Noonan *et al.* 2007). This study attempts to better understand chair and candidate roles and expectations through blending the concepts of the andragogy theory (Knowles, 1978) and mentor role theory (Kram, 1988). Andragogy theory emphasizes that identifying the disconnect between what the learner already knows, and what they have yet to learn, is of particular importance to adult education (Knowles, 1978). This task is particularly difficult

as many who assume the role of Chair may not be trained as educators (Gonczi, 2013). Mentor role theory suggests four stages of the mentoring relationship and theorized how the stages can support the growth and development of the mentor and mentee (Kram & Higgins, 2009). Mentor role theory argued that the adult learner (mentee) should not be dependent on the teacher (mentor) and that the teacher was but one of many resources for the adult learner (Carney, 1986).

Kathy Kram (1983) studied 18 mentee/mentor relationships prior to developing a model for stages of the developmental relationship. Kram reviewed the stages of adult development and how mentoring can be a vehicle to support adult success. Consideration of the stages of development of the doctoral candidate, as a mentee, can be a factor in the type of strategy or practice that the chair as a mentor, can apply.

The relationship between the Chair and candidate is critically important to the success of the candidate. In one medium sized study (N = 839) of PhD candidates in the Netherlands, the match between the PhD candidate and their Chair was a significant predictor of the candidate's satisfaction and retention (van Rooij *et al.* 2021). Addressing the problem of doctoral candidates not gaining adequate support to finish the dissertation was explored through surveying candidates to examine the role of the chair as well as what support practices for teaching and learning are appropriate for the candidate, with the application of the principles of andragogy and stages of the mentor relationship. Aligning Knowles principles of Andragogy and Kram's stages of mentoring demonstrate how the theories operate in concert and to support the research of the candidate and chair relationship and provide a theoretical lens to examine the topic.

Limitations

A limitation of the study was the smaller sample size given the population in the USA that has earned a Doctorate degree (Connelly, 2013; Yin,2018). To mitigate this risk, the G-power calculation for sample size was used to find a sample size that provided an effective size based on the population of the study (Faul *et al.* 2009). Another limitation was access to the sample given the time restraints. To mitigate access to the population, the choice was made to use social media campaigns to reach a broad audience in the USA. A third limitation is the use of a quantitative approach. Quantitative studies use survey instruments with close ended questions that could lead to limited outcomes. To mitigate this challenge, ranking statements were used to allow for more options for the responses. A final limitation is that use of recruitment from social media relied on the self-report of the participants as it relates to obtaining a doctoral degree and therefore this was not able to be thoroughly validated. Future studies assessing the impact of the relationship between the doctoral Candidate and the doctoral Chair should address this limitation.

Significance of the Study

All stakeholders of doctoral programs can benefit from the shared experiences of those who have participated in the doctoral journey. Research can impact societal change when a call to action is identified, and implementation occurs. A partnership approach is instrumental to the candidate building the attributes and skills needed to for future research projects (Deeley & Brown, 2014). Conducting this research assisted with the initial development of a model of support that the chair and candidate can use to create a process for working to develop the dissertation. The model can be used as reference for the candidate and the chair.

Malcolm Knowles introduced six assumptions to the Andragogy theory which align with supporting the doctoral candidate (Cochran & Brown, 2016). The assumptions of self-concept, experience, aligning readiness to learn with need, problem-centered focus, intrinsic motivation, and knowing the why are key resources for building a model of partnership support grounded in theory. Knowles Andragogy theory (1984) proposed that motivation is an important internal factor to an adult learner's experience and success. Developing a model for successful completion of the doctoral experience was an aim of this study. Embracing the principles of Kram's mentor role theory allows the chair to support the candidate in ways that include career development (Ragins & Cotton, 1999). Kram's mentor role theory and Knowles andragogy were merged to guide the strategic partnership of the chair and candidate.

Population

The goal was to obtain a minimum sample of 111 participants as determined by conducting a power analysis using G*Power 30.0 software and the minimum sample size of 30 (Faul *et al.* 2009). Given a small to medium effect size coefficient of .05 based on correlation analysis, and a power value of .95, the analysis yielded a minimum sample size of 111. Online professional networking and personal networking sites were used to contact and survey participants. Participants were current doctoral candidates completing their research study or doctoral graduates who completed their studies in the USA.

Pilot Study

After attaining IRB approval, the pilot study was conducted for the purposes of reliability and validity of the study(Connelly, 2008). The pilot study consisted of 12 participants who have graduated with a Doctorate degree in any discipline at an educational institution in the USA. The rule of thumb number of 12 was used for the pilot study based on the understanding that the mean, variance and regulatory considerations will take an expected or normal form (Julious, 2005). The pilot study utilized the same group of 12 for both the initial checks of reliability and initial correlational analysis, limiting the generalizability of the pilot study to the overall sample.

The pilot study participants were not counted in the final research study analysis and were recruited via social media campaigns on Facebook and LinkedIn.

RESULTS AND DISCUSSION

The full study consisted of responses from 116 participants who have graduated with a Doctorate degree in any discipline or are currently doctoral candidates working on their research study at an educational institution in the USA. Participants were recruited using social media campaigns on Facebook and LinkedIn. Of the 116 participants, 41.4% were male and 58.6% were female. In addition, 30.2% were between the ages of 25 to 30, 31.9% were between the ages of 31 to 40; 16.4% were between the ages of 41 to 50; 12.1% were between the ages of 51 to 60; 6.9% were 61 to 70; 2.6% were 70 or over.

Participants rated 17 statements on a Likert-type scale of 0 to 6. The scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) with 6 as a not applicable option (*not applicable*). Statement 1, my mentor was easy to communicate with, 77.6% of participants either slightly agreed, agreed, or strongly agreed with this statement. 7.8% stated not applicable. Statement 2, my mentor was always accessible to me, 75% of participants either slightly agreed, agreed, or strongly agreed with this statement. 9.5% stated not applicable. Statement 3, my mentor taught me technical skills to complete my doctoral degree, 68.1% agreed or strongly agreed or slightly agreed, 24% either slightly or strongly disagreed, and 7.8% indicated not applicable. Statement 4, my mentor was empathetic towards my needs, 13.7% slightly or strongly disagreed, 78.5% agreed, and 7.8% stated not applicable. Statement 5, My mentor taught me life lessons, 25% disagreed, 64.8% agreed, and 10.3% indicated not applicable. Statement 6, my mentor listened to what I needed to learn from him or her, 12.1% indicated not applicable, 15.5% strongly disagreed, and 72.4% agreed. Statement 7, my mentor talked with me outside of class addressing questions I had, 19% disagreed, 68.1% agreed, and 12.9% indicated not applicable. Statement 8, my mentor networked on my behalf to complete published research prior to completing my doctoral degree, 34.5% disagreed, 47.4% agreed, and 18.1% indicated not applicable.

Statement 9, my mentor was not my advisor, 41.4% disagreed, 17.2% indicated not applicable, and 41.4% agreed. Statement 10, my mentor was matched with my interests, goals and dissertation interest, 74.1% agreed, 15.5% disagreed, and 10.3% indicated not applicable. Statement 11, my mentor assisted with me meeting my goals in a timely manner, 74.2% agreed, 18.1% disagreed, and 7.8% indicated not applicable. Statement 12, my mentor provided assistance to successfully complete my degree in a reasonable time frame, 9.5% indicated not applicable, 76.7% agreed, and 13.7% disagreed. Statement 13, my mentor provided the support that I needed to successfully complete my doctoral degree, 71.6% agreed, 18.2% disagreed and 10.3% indicated not applicable. Statement 14, my relationship with my mentor was strong, 74.2% agreed, 16.4% disagreed and 9.5% indicated not applicable. Statement 15, my mentor made me

feel comfortable communicating with him or her, 12% strongly disagreed, 76.8% agreed, and 11.2% indicated not applicable. Statement 16, my mentor assisted with lowering my stress levels during the completion of my study, 24.1% disagreed, 67.2% agreed, and 8.6% indicated not applicable.

Statement 17, my mentor assisted with my overall well-being, 9.5% indicated not applicable, 20.7% disagreed, and 69.8% agreed. The items that ranked of the highest importance from statement 17 were availability, communicative, getting back to the candidate with a timely manner, helping with submitting the proposal and help with the methodology. Participants ranked the importance of communication, help with presenting at conferences, help with the dissertation from start to finish, help with presenting at conferences, help with publishing, and assistance with professional organizations. The responses indicate a high importance placed on communication, help with future publishing, help with the dissertation from start to finish, an assistance with professional organizations.

The results of statement 18, participants indicated that the following mentoring strategies were essential during their doctoral journey: communicative, availability, getting back to you within a reasonable amount of time, help with the methodology and help with the theoretical framework. Statement 20, participants ranked the following mentoring items were the most helpful to them during their doctoral journey: constructive feedback, advice on each step of the research process, conducting timely one on one sessions, and providing recommendations.

Spearman's Correlation Coefficient

Spearman's correlation coefficient was used to determine the correlation between two variables and was used to test rank items for questions 19 and 21 in order of importance to the candidate's doctoral journey (J.A.K., & S.A. 2018). The Spearman's rank-order correlation was used to measure the strength and direction of the monotonic association between two ranked variables as assessed through the scatterplots. Spearman's rank-order was chosen due to the ordinal nature of individual Likert items, as the data is not continuous and there is an inability to determine a consistent distance between two points. Statements 19 and 21 ranked items in order of importance to the candidate's doctoral journey: "Please rank ALL statements below in the order of importance to your doctoral experience".

Assistance with Professional Organization (Statement 19)

A Spearman's rank-order correlation was run to assess the variable *Assistance with Professional Organization.* This variable was showed statistically significant negative correlations with *Effective, Timely Communication* $r_s(116) = -.447$, $p < .001$, *Help with Writing the Dissertation from Start to Finish* $r_s(116) = -.448$, $p < .001$, and *Help With Presenting at Conferences* $r_s(116) = -.295$, $p = .001$. Preliminary analysis showed each relationship to be monotonic, as assessed by visual inspection of a scatterplot.

Help with Publishing Future Articles in Professional Journals (Statement 19)

A Spearman's rank-order correlation was run to assess the variable *Help with Publishing Future Articles in Professional Journals.* This variable showed statistically significant negative correlations with *Effective and Timely Communication* $r_s(116) = -.327$, $p < .001$ and *Help with Writing the Dissertation from Start to Finish* $r_s(116) = -.347$, $p < .001$. Preliminary analysis showed each relationship to be monotonic, as assessed by visual inspection of a scatterplot.

The frequencies were assessed for statement 19, regarding ranking the order of importance from 1-5. 1 being of most importance and 5 being of least importance. The frequency indicated that timely communication ranked highest with 66.4% ranking it of the most important. Help with writing the dissertation ranked second highest with 53.4% ranking it as the second most important.

Introduced or encouraged networking opportunities (Statement 21)

A Spearman's rank-order correlation was run to assess the variable *Introduced or encouraged networking opportunities.* This variable showed statistically significant negative correlations with *Constructive feedback from my mentor* $r_s(116) = -.453$, $p < .001$, *Advice on each step of my research project* $r_s(116) = -.368$, $p < .001$, *Providing recommendations including survey instruments, analysis, participants, etc…* $r_s(116) = -.361$, $p < .001$, and *Providing personalized resources based on my individual needs* $r_s(116) = -.290$, $p < .001$.

Preliminary analysis showed each relationship to be monotonic, as assessed by visual inspection of a scatterplot.

Introduced or encouraged networking opportunities showed a statistically significant positive correlation with *Conducted timely one on one meetings with me* $r_s(116) = .223$, $p < .001$. Preliminary analysis showed this relationship to be monotonic, as assessed by visual inspection of a scatterplot.

Conducted timely one on one meetings with me (Statement 21)

A Spearman's rank-order correlation was run to assess the variable *Conducted timely one on one meetings with me.* This variable showed statistically significant negative correlations with *Advice on each step of my research project* $r_s(116) = -.388$, $p < .001$, *Providing recommendations including survey instruments, analysis, participants, etc…* $r_s(116) = -.334$, $p < .001$, and *Providing personalized resources based on my individual needs* $r_s(116) = -.383$, $p < .001$. Preliminary analysis showed each relationship to be monotonic, as assessed by visual inspection of a scatterplot.

Assistance with introducing me to peer student work groups (Statement 21)

A Spearman's rank-order correlation was run to assess the variable *Assistance with introducing me to peer student work groups.* This variable showed statistically significant negative correlations with *Constructive feedback from my mentor* $r_s(116) = -.387$, $p < .001$, *Advice on each step of my research project* $r_s(116) = -.366$, $p < .001$, *Providing recommendations including survey instruments, analysis, participants, etc…* $r_s(116) = -.287$, $p < .001$. Preliminary analysis showed each relationship to be monotonic, as assessed by visual inspection of a scatterplot.

Assistance with introducing me to peer student work groups also showed a statistically significant positive correlation with *Assistance with SMART goal planning* $r_s(116) = .318$, $p < .001$. Preliminary analysis showed this relationship to be monotonic, as assessed by visual inspection of a scatterplot.

The Spearman's correlation coefficient test was used for the following items from statement 21: Please rank ALL statements below in order of importance to your doctoral experience with 1 being of the most importance and 10 of the lesser importance. The statement 21 ranking items were constructive feedback, advice on the research process, recommendations, personalized resources, alignment of research goals, breaking down research into measurable pieces, assistance with SMART goal planning, introduction to peer student work groups, conducting timely meetings, and introducing networking opportunities. The Spearman correlation coefficient is statistically significant at the .01 probability level indicative of a relationship between variables. A relationship does not indicate causation but a monotonic relationship indicating when one variable increases it creates an increase in the other variables. The null hypothesis is accepted.

Frequencies were assessed as it relates to statement 21, regarding ranking the order of importance from 1-10. 1 being of most importance and 10 being of least importance. The frequency indicated that constructive feedback was ranked most frequently as most important by 57.8% of participants . 41.4% of participants ranked advice on each step of the second highest importance. 39.7% of participants ranked providing recommendations of the third highest importance.

Data from the study was used to draft a framework to use as a model for dissertation candidate and chair success in supporting completion of the dissertation and doctoral program. The model supports a learner-centered approach for adult learners (Cochran & Brown, 2016). The model will aid in building relationships and constructing the dissertation. The model could be used to form partnerships in other business and professional relationships. Further research will contribute extra data to finalize a model of support. Key information from the data was used to draft Table 1 below. Three areas of concern include communication, resources, and strategies to support the process.

Table 1: Data from doctoral candidates identified three key areas of support the candidates needed.

Communication	Resources	Strategies
Empathy	Recommend Hardware	Communication Process
Constructive Feedback	Recommend Software	Writing Strategies
Motivation	Data Analysis Support	Develop Completion Plans
Timely Communication		

Additional research using a qualitative design is needed to finish the framework for candidate and chair strategic partnering. Additional qualitative research may include further insight regarding various aspects of the SPS, for example, as it relates to one-on-one meetings, determining if the meetings are conducted face to face or remotely and whether that makes a difference to the Doctoral candidate. Based on the correlations identified in the study, further qualitative research can be conducted to determine of Doctoral candidates value the assistance that they are receiving from the Doctoral chair. In addition, qualitative research could be conducted to understand if those that value the assistance from the Doctoral chair are satisfied with the amount of assistance received throughout the dissertation process.

CONCLUSION

Cochran and Brown (2016) insist that improving the learning experience of the adult learner includes addressing the needs of the learner quickly to ensure success. The first recommendation is to create strong mentorship programs focused on tools and techniques that garner high quality constructive feedback for Doctoral candidates. 57.8% of participants ranked constructive feedback of the most importance to their success. In addition, 82.8% ranked constructive feedback from the mentor as the mentorship strategy that was most useful to them.

The second recommendation is to ensure that mentorship programs foster high quality communication between the Chair and Candidate. When ranking strategies in the order of importance, timely communication ranked highest with 66.4% ranking it one of most importance strategies for candidates. Mentorship programs should ensure that guidelines are set for communication to ensure that timely communication is fostered.

Another recommendation is to incorporate a variety of strategies including, but not limited to providing advice, recommendations, and help writing the dissertation as part of the mentorship program. Each of these strategies were ranked in the top 5 from the participants. Participants shared that their success and timely completion of their doctoral coursework was dependent on gaining advice from their mentor, recommendations from their mentor, and help with writing the dissertation from their mentor.

Participants shared the importance of the accessibility of the mentor, a mentor who is empathic, a mentor who the candidate feels comfortable communicating with, a mentor who answer questions effectively, a mentor who is matched to the individual candidate, and a mentor who can assist the candidate with meeting their goals. Mentorship programs should aim to match candidates with mentors who are aligned to the individual needs of the candidate. It is recommended that a personalized approach is used to connect the chair and candidate. The mentorship relationship can provide support to the candidate throughout the process to promote the successful completion of the Doctoral study (Columbaro, 2009; Deshpande, 2017; Holley, 2011; Holley & Caldwell, 2012).

Finally, it is recommended that further research is conducted in this area in order to gain more insight as to how specific strategies may be used to assist candidates with timely and effective completion of doctoral studies. This study indicates the items that are of importance to the candidate and those items can be explored further when developing specific strategies and tools to build the candidate and chair relationship throughout the dissertation process. Further studies may be conducted from a qualitative perspective as well to gain individual insight from participant personal experiences from their doctoral study experience.

The purpose of this qualitative correlational study was to find effective tools, models, and strategies to build the relationship between the Chair and the Candidate in an effort to enhance the doctoral candidate's research experience. Based on the participants' responses to the SPS, the null hypothesis was accepted, indicating that the Dissertation chair and the Dissertation candidate relationship does contribute to the Doctoral candidate successfully completing the doctoral program in a statistically significant way (Cockrell & Shelley, 2011). Further research will need to be conducted from a qualitative perspective to guide the creation of the support model and to find specific effective tools and strategies to support building the relationship between the Dissertation Chair and Candidate in the USA.

REFERENCES

Allum, J.R. 2014. Graduate enrollment and degrees: 2003 to 2013. Council of Graduate Schools.

Anekstein, A.M. and Vereen, L.G. 2018. Research mentoring: A study of doctoral student experiences and research productivity. *The Journal of Counselor Preparation and Supervision,* **11**(1): 5.

Berk, R.A., Berg, J., Mortimer, R., Walton-Moss, B. and Yeo, T.P. 2005. Measuring the effectiveness of faculty mentoring relationships. *Academic Medicine: Journal of the Association of American Medical Colleges,* **80**(1): 66–71.

Black, R. 2017. E-Mentoring the online doctoral student from the dissertation prospectus through dissertation completion. *Journal of Learning in Higher Education,* **13**(1): 1–8.

Burrington, D., Madison, R.D. and Schmitt, A. 2020. Dissertation committee chairs' current practices to support doctoral students in an online doctoral program. *Online Journal of Distance Learning Administration,* **23**(3): 1–13. westga.edu

Carney, T. 1986. Book review: Andragogy in action. *Canadian Journal of Communication,* **12**(1): 11–80.

Cochran, C. and Brown, S. 2016 'Andragogy and the adult learner'. *In* Flores, K.A., Kirstein, K. Cockrell, C. N., & Shelley, K. (2011). The relationship between academic support systems and intended persistence in doctoral education. *Journal of College Student Retention: Research, Theory & Practice,* **12**(4): 469–484.

Columbaro, N.L. 2009. e-Mentoring possibilities for online doctoral students: A literature review. *Adult Learning,* **20**(3/4): 9–15.

Connelly, L.M. 2013. Limitation section. *Medsurg Nursing,* **22**(5): 325-336.

Connelly L.M. 2008. Pilot studies. *Medsurg nursing : official journal of the Academy of Medical-Surgical Nurses,* **17**(6): 411–412.

Council of Graduate Schools. 2008. Ph.D. completion and attrition: Analysis of baseline program data from the Ph.D. completion project. Council of Graduate Schools.

Deeley, S.J. and Brown, R.A. 2014. Learning through partnership in assessment. *Teaching and Learning Together in Higher Education,* **13**.

Deshpande, A. 2017. Faculty best practices to support students in 'virtual doctoral land'. *Higher Education for the Future,* **4**(1): 12–30.

Diaz, M. 2015. The "new" DSW is here: Supporting degree completion and student success. *Journal of Teaching in Social Work,* **35**: 101–115.

Duffy, J.O., Wickersham-Fish, L., Rademaker, L. and Wetzler, E. 2018. Using collaborative autoethnography to explore online doctoral mentoring: Finding empathy in mentor/protege relationships. *American Journal of Qualitative Research,* **2**(1): 57–76.

Eby, L.T. and Allen, T.D. 2002. Further Investigation of Protégés' Negative Mentoring Experiences: Patterns and Outcomes. *Group & Organization Management,* **27**(4): 456– 479.

Eby, L.T., McManus, S.E., Simon, S.A. and Russell, J.E.A. 2000. The Protege's Perspective Regarding Negative Mentoring Experiences: The Development of a Taxonomy. *Journal of Vocational Behavior,* **57**(1): 1–21.

Esposito, J., Lee, T., Limes-Taylor Henderson, K., Mason, A., Outler, A., Jackson, J.R., Ferrell, E. (Betsy) W., Ensminger, D. and Coleman, E. 2019. Changing the doctoral student-dissertation chair relationship through the article dissertation format. *Mid-Western Educational Researcher,* **31**(2): 166–185.

Gardner, S.K. 2008. Fitting the mold of graduate school: A qualitative study of socialization in doctoral education. *Innovative Higher Education,* **33**(2): 125–138.

Gardner, S.K. 2009. Student and faculty attributions of attrition in high and low completing doctoral programs in the United States. *Higher Education,* **58**: 97–112.

Gardner, S.K. 2010. Contrasting the socialization experiences of doctoral students in high- and low-completing departments: A qualitative analysis of disciplinary contexts at one institution. *The Journal of Higher Education,* **81**(1): 61–81.

Gonczi, A. 2013. Competency-based approaches: Linking theory and practice in professional education with particular reference to health education. *Educational Philosophy and Theory,* **45**(12): 1290–1306.

Holley, K. 2011. A cultural repertoire of practices in doctoral education. *International Journal of Doctoral Studies,* **6**: 79–94.

Holley, K. and Caldwell, M. 2012. The challenges of designing and implementing a doctoral student mentoring program. *Innovative Higher Education,* **37**(3): 243–253.

Hunter, K.H. and Devine, K. 2016. Doctoral students' emotional exhaustion and intentions to leave academia. *International Journal of Doctoral Studies,* **11**: 35–61.

J, A.K. and S, A. 2018. Aspect-based opinion ranking framework for product reviews using a Spearman's rank correlation coefficient method. *Information Sciences,* **460–461**: 23–41.

Julious, S.A. 2005. Sample size of 12 per group rule of thumb for a pilot study. *Pharmaceutical Statistics,* **4**: 287-291.

Katz, R. 2003. The human side of managing technological innovation (2nd ed.). Oxford University Press.

Katz, C.C., Elsaesser, C., Klodnik, V.V. and Khare, A. 2019. Mentoring matters: An innovative approach to infusing mentorship in a social work doctoral program. *Journal of Social Work Education,* **55**(2): 306–313.

Kent, V., Runyan, H., Savinsky, D. and Knight, J. 2020. Mentoring doctoral student mothers in counselor education: A phenomenological study. *Professional Counselor,* **10**(4): 532–547.

Knowles, M.S. 1978. Andragogy: Adult Learning Theory in Perspective. *Community College Review,* **5**(3): 9–20.

Knowles, M. 1984. *Andragogy in Action.* Jossey-Bass.

Kram, K.E. 1983. Phases of the mentoring relationship, *Academy of Management Journal*, **26**(4): 608–625.

Kram, K.E. 1988. *Mentoring at work: Developmental relationships in organizational life.* University Press of America.

Kram, K.E. and Higgins, M.C. 2009. A new mindset on mentoring: Creating developmental networks at work. MIT Sloan Management Review. Kram-Higgins_A-New-Mindset-on-Mentoring.pdf (bu.edu)

Lafrance, J., Lafrance, D. and Melton, T.D. 2020. Chair agency, chair preparation, and academic supports in educational leadership doctoral programs in the United States. *International Journal of Doctoral Studies,* **1**: 111.

Leijen, Ä., Lepp, L. and Remmik, M. 2016. Why did I drop out? Former students' recollections about their study process and factors related to leaving the doctoral studies. *Studies in Continuing Education,* **38**(2): 129–144.

Litalien, D. and Guay, F. 2015. Dropout intentions in PhD studies: A comprehensive model based on interpersonal relationships and motivational resources. *Contemporary Educational Psychology,* **41**: 218–231.

Maul, J., Berman, R. and Ames, C. 2018. Exploring the psychological benefits of using an emerging video technology to coach and retain doctoral learners. *International Journal of Doctoral Studies,* **13**: 49–78.

Menon, R.R., Gopalakrishnan, S., Menon, U.K., B., P., Sasidharan, A., Unni C., S. N., Radhakrishnan, N. and Sivadas, S. 2021. Preparation and validation of a new questionnaire to study faculty perception of online teaching - Use of Cronbach's alpha and pilot. *Medica Innovatica,* **10**(2): 1–6.

Ministry of Education, Leisure, and Sports (MELS). 2013. Education indicators: 2012 edition. MELS. http://www.mels.gouv

Noonan, M.J. and Ballinger, R. 2007. *Peer and Faculty Mentoring in Doctoral Education: Definitions, Experiences, and Expectations.*

Orellana, M.L., Darder, A., Pérez, A. and Salinas, J. 2016. Improving doctoral success by matching PhD students with supervisors. *International Journal of Doctoral Studies,* **11**: 87–103.

Ragins, B.R. and Cotton, J.L. 1999. Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology,* **84**: 529–550.

Roberts, L.R., Tinari, C.M. and Bandlow, R. 2019. An effective doctoral student mentor wears many hats and asks many questions. *International Journal of Doctoral Studies,* **14**: 133–159.

Roberts, L.R. 2020. The Validation of using assessment tools and a theory to mentor doctoral students with integrity and trustworthiness. *International Journal of Doctoral Studies,* **15**(1): 29–56.

Shavers, M.C. and Moore, J.L, III. 2014. The double-edged sword: Coping and resiliency strategies of African American women enrolled in doctoral programs at predominately white institutions. *Frontiers: A Journal of Women's Studies,* **35**(3): 15.

van Rooij, E., Fokkens-Bruinsma, M. and Jansen, E. 2021. Factors that influence PhD candidates' success: The importance of PhD project characteristics. *Studies in Continuing Education,* **43**(1): 48–67.

West, I.J.Y., Gokalp, G., Pena, E.V., Fischer, L. and Gupton, J. 2011. Exploring effective support practices for doctoral students' degree completion. *College Student Journal,* **45**(2): 310–323.

Yin, R.K. 2018. *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.