In Search of a Distance Education, Doctoral Persistence Model

Amanda J. Rockinson-Szapkiw, LPC, EdD
With high attrition (50% to 70%) in online, doctoral programs, program administrators and faculty need to identify ways to foster persistence. While Tinto’s student integration model and Bean and Metzner’s student attrition model are foundational to understanding persistence in higher education, they have limited explanatory power for the persistence of online, doctoral candidates. Given the unique characteristics of online, doctoral candidates and doctoral programs, a synthesis of empirical and theoretical literature is needed and was used to create a composite model to better explain persistence among this population. This model will be discussed. Derived from the model, I will present course, program, and institutional level strategies for improving online, doctoral persistence.

Abstract
Education
- B.S. in Elementary Education
- M.A. in Community Counseling
- EdD in Distance Education
- Licensed School and Professional Counselor

Experience
- Over 5 years experience as a counselor
- Over 8 years experience in higher education
- Over 5 years experience in higher education administration for an EdD program

Research
- Distance Education and Technology Integration
- Doctoral Persistence

About Me
About the Presentation
Persistence...haven’t we been researching that for decades?

About the Presentation
The current state of research:

- Residential, Undergraduate and Graduate Students
- Residential, Doctoral Students
- Online, Doctoral Student Research has been qualitative and antidotal

(Ivankova & Stick, 2007; Terrell 2005; Terrell, Snyder, & Dringus 2009; Wao & Onwuegbuzie 2011)

About the Presentation
A distance education, doctoral persistence model that guides program administrators and faculty actions needs to:

- Synthesize the persistence models of Tinto (1975, 1987, 1993) and Bean and Metzner (1985)
- Consider the unique characteristics of online students and programs
- Consider the unique skills, knowledge and support needed for various doctoral program stages.

About the Presentation
Online Doctoral Persistence

Integration Variables

Institutional Variables

About the Presentation – A Caveat
Why do doctoral students drop out? (Lovitts, 2001)

- Over 50% of dropouts cited academic or institutional reasons
- 20% of dropouts cited financial reasons
- 20% of dropouts cited personal or environmental reasons
- 10% of dropouts cited miscellaneous

Institutional factors exert more influence on doctoral persistence than student characteristics!
Identify the Doctoral Persistence Problem

Discuss the Gap in the Literature and How the Literature Informed the Building of a Predictive Model for Online, Doctoral Persistence

Discuss a Predictive Model for Online, Doctoral Persistence that Synthesizes Empirical and Theoretical Literature and Its Predictive Validity

Identify Strategies for Increasing Online, Doctoral Persistence that Draws from the Presented Model

Objectives
The Persistence Problem

Identify the Doctoral Persistence Problem
The doctoral program = “high risk” strategy

The Persistence Problem

Brailsford, 2010, p. 15
40% to 60% of doctoral students drop out

Attrition rates for EdD programs are as high as 70%


The Persistence Problem
Online doctoral programs report attrition rates 10% to 20% higher than traditional programs.

(Rovai, 2002; Terrell 2005; Terrell, Snyder, & Dringus 2009)
The Persistence Problem

Part 1: The Entry Stage
Part 2: The Knowledge and Skill Development Stage
Part 3: The Consolidation Stage
Part 4: The Research/Scholarship Stage
Part 5: The Completion Stage

The largest degree of attrition in a doctoral program occurs during candidacy.

(Grover, 2007; National Science Foundation, 1998; Rockinson-Szapkiw, Spaulding, 2014; Tinto, 1993)
In The Research and Scholarship Stage

- Transition from student to researcher.
- Transition “from being a consumer of knowledge….to creator…” (Gardner, 2008, p. 328)
- Required to demonstrate the ability to independently design, conduct, analyze, and present research.
- Writing a dissertation or action research project is difficult.

(Rockinson-Szapkiw & Spaulding, 2014, Introduction)

The Persistence Problem
The Persistence Problem

The cost

Universities
- Economic
- Credibility
- Federal Funding
- Accreditation

Doctoral Candidate
- Personal
- Professional
- Economic effects

Program administrators and faculty need to:
- Understand the factors that significantly influence online, doctoral persistence
- To identify ways to foster doctoral persistence.
Doctoral Persistence – “the continuance of a student’s progress toward the completion of a doctoral degree” despite the numerous challenges faced.

(Bair, 1999, p. 8)
Persistence Models... or the Attrition Models & Other Research

Discuss the Gap in the Literature and How Literature Informed the Building of a Predictive Model for Online, Doctoral Persistence
Individual variables

- Family background
- Individual attributes
- Pre-college experiences

Institutional variables

- Academic Integration (GPA; Intellectual Development/ Interaction with faculty)
- Social Integration (Peer interactions; participation in extracurricular activities)

Persistence Models: Tinto’s (1975, 1993) Student Integration Model
Validates the need for universities to assume an active role in the academic and social integration progress (e.g. orientations).

Academic and social integration into the university, as defined by Tinto, may lack relevancy. Did not consider environmental variables.

Tinto’s (1975, 1993) Student Integration Model

Persistence Models

(Bean & Metzner, 1985; Tinto, 1975,1993; Wao, 2010; Wao & Onwuegbuzie, 2011)
Online, Doctoral Persistence Model

Integration Variables
- Academic
- Social

Online Doctoral Persistence
Persistence

Academic Variables
(e.g. study habits, course availability)

Background Variables
(e.g. age, ethnicity, prior GPA, goals)

Environmental factors
(e.g. finances, employment, family, external support)

Academic and Psychological Outcomes while attending School
(e.g. concerns about finances, lack of time and resources, familial and work conflicts, stress, utility, goal commitment)

Bean and Metzner’s (1985) Student Attrition Model for the Nontraditional Commuter Students

Persistence Models
Validation of the need to consider environmental factors.

Designed with on-campus students in mind.

Bean and Metzner’s (1985) Student Attrition Model for the Nontraditional Commuter

Persistence Models

(Bean & Metzner, 1985;
Online, Doctoral Persistence Model

Institutional Variables
- Financial Aid
- Support Services

Integration Variables
- Academic
- Social (Faculty & Peer)
Validate the positive effects of social and academic integration (Tinto, 1975) and the influence of external forces (Bean & Metzner, 1985) on persistence.

Do **NOT** consider:
- the unique characteristics of online students and programs
- the unique skills, knowledge, and support needed for various doctoral program stages.

**Tinto (1975, 1993) & Bean and Metzner’s (1985) Persistence Models**
Persistence Models: Distance Education

Effective Distance Education

- Community (Rovai, 2002)
- Presence (Picciano, 2002)
- Interaction (Moore, 1989, 1993)
- Community of Inquiry (Garrison, Anderson, & Archer, 2000)
## Sense of Community

| **Social community**, derived primarily from the work of McMillan and Chavis (1986) and McMillan (1996), represents the feelings of the community of students regarding their spirit, cohesion, trust, safety, trade, interdependence, and sense of belonging. | **Learning community**, on the other hand, consists of the feelings of learning community members regarding the degree to which they share group norms and values and the extent to which their educational goals and expectations are satisfied by group membership. |

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## Persistence Models: Distance Education

Rovai, Whiting, Lucking, 2004, p. 269
Online, Doctoral Persistence Model

**Institutional Variables**
- Financial aid
- Support Services

**Integration Variables**
- Academic
- Social (Sense of Community/Doctoral Connectedness)
<table>
<thead>
<tr>
<th>Element</th>
<th>Definition</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Presence</td>
<td>Ability of learner to project self socially and emotionally, thereby being perceived as a real person in mediated communication</td>
<td>Open communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group Cohesion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Affective Expression</td>
</tr>
<tr>
<td>Cognitive Presence</td>
<td>Extent to which learners are able to construct and confirm meaning through reflection and discourse</td>
<td>Triggering event</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exploration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integration</td>
</tr>
<tr>
<td></td>
<td>Design, facilitation, and direction in the course of cognitive and social processes to ensure an educationally meaningful experience.</td>
<td>Resolution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Design and Organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Facilitation of discourse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Direct Instruction</td>
</tr>
</tbody>
</table>
Persistence Models: Doctoral Education

• Connection between coursework and skills needed to execute the dissertation,
• Faculty guidance, facilitation, and instruction
• Academic Match—Correspondence between student’s goals and expectations and program and curriculum focus, which is articulated clearly in program materials

Institutional

Program
Curriculum
Instruction

de Valero, 2001; Golde & Dore, 2001; Hoskins & Goldberg, 2005; Jimenez, 2011; Spaulding & Rockinson-Szapkiw, 2012; Tenenbaum, Crosby, & Gliner, 2001
Online, Doctoral Persistence Model

Institutional Variables
- Financial aid
- Program, Curriculum, & Instruction
- Support Services

Integration Variables
- Academic
- Social (Faculty & Peer)
Persistence Models: Doctoral Education

Satisfaction with doctoral curriculum and program
- Academic integration is fostered via community built in doctoral courses where shared knowledge and knowing occurs in a manner that prepares students to successfully develop as a scholar and develop skills to execute research.

Satisfaction with academic performance
- Academic integration refers to the “acquisition of knowledge and development of skills” (Tinto, 1997, p. 600), more precisely, the satisfaction with learning and academic performance, which is more relevant to graduate students and better measure of learning than grades.

Satisfaction with faculty help
- Academic integration is generally dependent on student relationships with faculty and advisors and their satisfaction with the faculty’s assistance through the program.

Earl-Novell, 2006; Girves & Wemmerus, 1998; Rockinson-Szapkiw, Spaulding, Swezey, & Wicks, 2014; Rovai, 2004; Strayhorn, 2005; Tinto, 1997; Wao & Onwuegbuzie, 2011
Online Doctoral Persistence Model

**Institutional Variables**
- Financial aid
- Support Services

**Integration Variables**
- Academic
- Social (Sense of Community/Doctoral Connectedness)
Persistence Models: Doctoral Education

Integration

Academic
Social
Economic
Familial

Girves & Wemmerus, 1998; Rockinson-Szapkiw, Spaulding, Swezey, & Wicks, 2014; Strayhorn, 2005; Tinto, 1997; Wao & Onwuegubuzie, 2011
Economic integration

“degree to which student’s financial needs are met while pursuing the doctorate” (Wao & Onwuegbuzie, 2011, p. 117).

3 questions related to financial strain, stress, and need were used to operationalize this concept.

Persistence Models: Doctoral Education

Earl-Novell, 2006; Girves & Wemmerus, 1998; Lovitts, 2001; Strayhorn, 2005; Wao & Onwuegbuzie, 2011
Familial integration

“the degree to which the candidate’s sense of connectedness with family members is met while pursuing the doctorate”

“this concept not only includes the maintaining of familial relationships and relatedness (a sense of belonging and care) but also includes the “fit” between the degree and family values” (Rockinson-Szapkiw, Spaulding, Swezey, & Wicks, 2014, p. 196).

Persistence Models: Doctoral Education
Online Doctoral Persistence

Institutional Variables
• Financial aid
• Program, Curriculum, & Instruction
• Support Services

Integration Variables
• Academic
• Social (Faculty & Peer)
• Economic
• Familial

Persistence Models
The Model & Study

Discuss a Predictive Model for Online, Doctoral Persistence that Synthesizes Empirical and Theoretical Literature and Its Predictive Validity
A predictive, correlation research design

Hierarchical multiple regression (HMR)

To examine how the variance in the likelihood of online, doctoral persistence can be explained by the linear combination of institutional and integration variables.

Design & Analysis
141 doctoral candidates

Enrolled in an online Doctor of Education program of 60 credit hours of courses with 9 of hours taken in residence

Located in the Commonwealth of Virginia.

Completed an online survey while participating in an online prospectus development course between Spring 2014 and Fall 2014.

Participants & Setting
Ethnicity:
- 110 (98%) Caucasian
- 23 (16.3%) African American
- 4 (2.1%) Asian
- 3 (2.1%) Latino
- 1 (.7%) was American Indian

Age:
- from 20 to 69
- majority reported their age range as
  - 30-39 (n=48, 34%)
  - or 40-49 (n=51, 32.6%).

The majority of the participants were married (n=117, 83%)

Employment
- worked full time (n=126, 89.4%).
- Participants were employed in the field of education as K–12 teachers, K–12 administrators, school psychologists or social workers, counselors, or university staff, faculty, or administrators.
Likelihood of online, doctoral persistence = College Persistence Questionnaire (Davidson, Beck, & Milligan, 2009)

- Good construct validity: PCA
- Test-retest reliability, $r = .67-.78$
- Predictive validity: 66% accuracy in predicting students would enroll for a proceeding semester
- Cronbach’s coefficient alpha was .909 in present study

Instrumentation:
Criterion Variable
<p>| <strong>Institutional</strong> |
|------------------|------------------------------------------------------------------------------------------------|
| <strong>Financial Support</strong> | Financial aid | Do you receive grants/scholarships that partially cover your tuition costs (grants, scholarships, tuition waiver, Federal Work/Study, graduate/teaching assistantships, etc.)? (Yes/No) | Bean &amp; Metzner, 1985; McAlpine &amp; Norton, 2006 (D) |
| | Full tuition remission | Do you receive grants/scholarships that fully cover your tuition costs (grants, scholarships, Federal Work/Study, graduate/teaching assistantships, etc.)? (Yes/No) | Bean &amp; Metzner, 1985; McAlpine &amp; Norton, 2006 (D) |
| <strong>Program, Curriculum, &amp; Instruction</strong> | Curriculum for dissertation preparation | How well did the courses you took during your EdD program prepare you for successfully completing your dissertation? (very well, well, fair, poor, very poor) | Bean &amp; Metzner, 1985; de Valero, 2001 (D); Jimenez, 2011(D); Tinto, 1975 |
| | Clarity of expectations and organization of program materials | (R) How clear have the faculty and the online resources been in detailing what you need to do in order to be successful in dissertation? (very unclear, somewhat unclear, neutral, somewhat clear, very clear) | Garrison, Anderson, &amp; Archer, 2000 (DE); Song, Singleton; Hill, &amp; Koh, 2004 (DE); Wasburn-Moses, 2008 (D) |
| | Facilitation | In general, when you receive evaluative feedback from dissertation instructors (e.g. research consultant, committee) how useful has it been in determining how to improve? (very often, somewhat often, sometimes, rarely, very rarely) | Garrison, Anderson, &amp; Archer, 2000 (DE); Wasburn-Moses, 2008 (D) |
| | Direct Instruction | In general, rate the quality of instruction you have received about your dissertation? (very quality, quality, neutral, poor quality, very poor quality) | Garrison, Anderson, &amp; Archer, 2000 (DE); Wasburn-Moses, 2008 (D) |
| <strong>Support Services</strong> | Satisfaction with support services | How satisfied are you with the support services offered (e.g. library, advising) while pursuing your EdD.? (5-point Likert type scale from very satisfied to very dissatisfied) | Bean &amp; Metzner, 1985; Braxton, Milem, &amp; Sullivan, 1998; Tinto, 1975 |</p>
<table>
<thead>
<tr>
<th>Academic Integration (Scores range from 5 to 25; Cronbach’s alpha= .819)</th>
<th>Integration Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Satisfaction with quality of faculty help</strong></td>
<td>How satisfied are you with the quality and level of instrumental help (e.g., coaching, challenging, critical feedback for dissertation improvement, encouragement of productivity in terms of publishing and presenting), psychosocial help (e.g., counseling, role modeling, empathizing), and networking assistance (e.g., helping students makes connections in the field, serving as a professional reference) you have received from faculty during your EdD program? (very satisfied, satisfied, neutral, dissatisfied, very dissatisfied)</td>
</tr>
<tr>
<td><strong>Satisfaction with curriculum</strong></td>
<td>How satisfied are you with the courses you took while pursuing your EdD? (very satisfied, satisfied, neutral, dissatisfied, very dissatisfied)</td>
</tr>
<tr>
<td><strong>Satisfaction with curriculum for dissertation preparation</strong></td>
<td>How satisfied are you how the courses you took while pursuing your EdD prepared you for dissertation? (very satisfied, satisfied, neutral, dissatisfied, very dissatisfied)</td>
</tr>
<tr>
<td><strong>Satisfaction with overall program experience</strong></td>
<td>How satisfied are you with your overall satisfaction with the EdD program? (very satisfied, satisfied, neutral, dissatisfied, very dissatisfied)</td>
</tr>
<tr>
<td><strong>Concern about academic performance</strong></td>
<td>(R) How often are you concerned about whether you can successfully complete your dissertation? (very often, somewhat often, sometimes, rarely, very rarely)</td>
</tr>
<tr>
<td>Social Integration</td>
<td>Doctoral Faculty Connectedness Scale (DSCS) (Terrell, Snyder, &amp; Dringus 2009); Cronbach’s alpha = .927</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Doctoral Student Connectedness Scale (DSCS) (Terrell, Snyder, &amp; Dringus 2009); Cronbach’s alpha = .955</td>
</tr>
<tr>
<td>Integration Variables</td>
<td>Financial stress</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Economic Integration Scores range from 3 to 15; Cronbach’s alpha= .65</td>
<td>(R) How often do you worry about having enough money to meet your and your family needs? (very often, somewhat often, sometimes, rarely, very rarely)</td>
</tr>
<tr>
<td></td>
<td>Bean &amp; Metzner, 1985; Earl-Novell, 2006 (D); McAlpine &amp; Norton, 2006 (D); Rockinson-Szapkiw, Spaulding, Swezey &amp; Wicks, 2014 (D); Wao &amp; Onwuegbuzie, 2011 (D)</td>
</tr>
</tbody>
</table>
Hierarchical multiple regression

Each block or step demonstrates how one or each set of new predictors add to the explanation of variance in the likelihood to persist
Analysis
<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood to Persist</td>
<td>41.43</td>
<td>16.39</td>
</tr>
<tr>
<td>Institutional Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Assistance (Model 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial aid</td>
<td>33 (77.2%)</td>
<td>116 (22.1%)</td>
</tr>
<tr>
<td>Full tuition remission</td>
<td>23 (15.4%)</td>
<td>118 (79.2%)</td>
</tr>
<tr>
<td>Support Services (Model 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with support services</td>
<td>4.23</td>
<td>.70</td>
</tr>
<tr>
<td>Program, Curriculum, &amp; Instruction (Model 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curriculum for dissertation preparation</td>
<td>3.26</td>
<td>1.12</td>
</tr>
<tr>
<td>Clarity of expectations and organization</td>
<td>4.23</td>
<td>1.03</td>
</tr>
<tr>
<td>Facilitation</td>
<td>4.52</td>
<td>.75</td>
</tr>
<tr>
<td>Direct Instruction</td>
<td>4.53</td>
<td>.69</td>
</tr>
<tr>
<td>Integration Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Integration (Model 4)</td>
<td>20.27</td>
<td>4.31</td>
</tr>
<tr>
<td>Social Integration (Model 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connectedness to faculty</td>
<td>38.01</td>
<td>6.62</td>
</tr>
<tr>
<td>Connectedness to other students</td>
<td>34.70</td>
<td>8.21</td>
</tr>
<tr>
<td>Economic Integration (Model 6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.09</td>
<td>2.78</td>
<td></td>
</tr>
<tr>
<td>Familial Integration (Model 7)</td>
<td>3.37</td>
<td>1.07</td>
</tr>
</tbody>
</table>

Results: Descriptives
<table>
<thead>
<tr>
<th>Assumption</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence of residuals</td>
<td>The Durbin-Watson statistic of 2.02 demonstrated no violation.</td>
</tr>
<tr>
<td>Linearity</td>
<td>Scatterplots and partial regression plots demonstrated a linear relationship existed between the criterion variable and each predictor variable and the criterion variable and the predictor variables collectively.</td>
</tr>
<tr>
<td>Multicollinearity</td>
<td>As no VIF value exceeded 10 and no Tolerance value was smaller than .10 (Warner, 2012), multicollinearity was not of concern.</td>
</tr>
<tr>
<td>Normality</td>
<td>Studentized residuals plotted against the unstandardized predicted values showed that the assumption of homoscedasticity was not violated. A histogram, normal P-P Plot and normal Q-Q Plot demonstrated that the residuals (errors) are approximately normally distributed.</td>
</tr>
<tr>
<td>Outliers</td>
<td>While eight cases in the distribution had Mahalanobis distance values exceeding the critical chi square value (29.588) for 11 variables, they were all maintained as none of their Cook’s distance values exceeded a 1, suggesting that these cases did not have undue influence on the model.</td>
</tr>
</tbody>
</table>

**Results: Assumptions**

No major violations
<table>
<thead>
<tr>
<th>Model 1: Financial aid</th>
<th>2</th>
<th>.91</th>
<th>.41</th>
<th>.01</th>
<th>.001</th>
<th>2</th>
<th>138</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2: Support Services</td>
<td>3</td>
<td>18.32</td>
<td>&lt; .001**</td>
<td>.27</td>
<td>.27</td>
<td>.27</td>
<td>52.45</td>
</tr>
<tr>
<td>Model 3: Program, Curriculum, &amp; Instruction</td>
<td>7</td>
<td>28.33</td>
<td>&lt; .001**</td>
<td>.60</td>
<td>.58</td>
<td>.31</td>
<td>25.87</td>
</tr>
<tr>
<td>Model 4: Academic</td>
<td>8</td>
<td>49.70</td>
<td>&lt; .001**</td>
<td>.75</td>
<td>.74</td>
<td>.15</td>
<td>80.62</td>
</tr>
<tr>
<td>Model 5: Social (Faculty &amp; Peer)</td>
<td>10</td>
<td>54.37</td>
<td>&lt; .001**</td>
<td>.81</td>
<td>.79</td>
<td>.06</td>
<td>18 &lt; .001**</td>
</tr>
<tr>
<td>Model 6: Economic</td>
<td>11</td>
<td>50.50</td>
<td>&lt; .001**</td>
<td>.81</td>
<td>.795</td>
<td>.004</td>
<td>3.07</td>
</tr>
<tr>
<td>Model 7: Familial</td>
<td>12</td>
<td>48.39</td>
<td>&lt; .001**</td>
<td>.82</td>
<td>.802</td>
<td>.008</td>
<td>5.56</td>
</tr>
</tbody>
</table>

The entire model, including all the institutional and integration variables, significantly predicted the likelihood of online, doctoral persistence. The linear combination of these variables explained 82% of the variance in online, doctoral persistence.
<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>SE B</th>
<th>B</th>
<th>t</th>
<th>p</th>
<th>Zero-Order $r$</th>
<th>Partial $r$</th>
<th>$sr^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aid</td>
<td>2.15</td>
<td>1.58</td>
<td>.06</td>
<td>1.36</td>
<td>.18</td>
<td>.09</td>
<td>.12</td>
<td>.05</td>
</tr>
<tr>
<td>Full tuition remission</td>
<td>1.05</td>
<td>1.91</td>
<td>.02</td>
<td>.55</td>
<td>.59</td>
<td>-.03</td>
<td>.05</td>
<td>.02</td>
</tr>
<tr>
<td>Satisfaction with support services</td>
<td>.97</td>
<td>1.08</td>
<td>.04</td>
<td>.90</td>
<td>.36</td>
<td>.53</td>
<td>.08</td>
<td>.03</td>
</tr>
<tr>
<td>Direct Instruction</td>
<td>4.22</td>
<td>1.22</td>
<td>.18</td>
<td>3.46</td>
<td>.001**</td>
<td>.67</td>
<td>.29</td>
<td>.13</td>
</tr>
<tr>
<td>Facilitation</td>
<td>2.19</td>
<td>.97</td>
<td>.10</td>
<td>2.26</td>
<td>.03*</td>
<td>.50</td>
<td>.20</td>
<td>.09</td>
</tr>
<tr>
<td>Clarity of expectations and organization of program materials</td>
<td>-.76</td>
<td>.61</td>
<td>-.05</td>
<td>-1.24</td>
<td>.22</td>
<td>.03</td>
<td>-.11</td>
<td>-.05</td>
</tr>
<tr>
<td>Curriculum for dissertation preparation</td>
<td>-.28</td>
<td>.64</td>
<td>-.02</td>
<td>-.45</td>
<td>.66</td>
<td>.40</td>
<td>-.04</td>
<td>-.02</td>
</tr>
<tr>
<td>Academic Integration</td>
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<td>8.05</td>
<td>&lt; .001**</td>
<td>.82</td>
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<td>Social Integration: Faculty Connectedness</td>
<td>.47</td>
<td>.14</td>
<td>.19</td>
<td>3.47</td>
<td>.001**</td>
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<tr>
<td>Social Integration: Peer Connectedness</td>
<td>.29</td>
<td>.09</td>
<td>.14</td>
<td>3.26</td>
<td>.001**</td>
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<td>Familial Integration</td>
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<td>2.36</td>
<td>.020*</td>
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</table>

Table 3

Contributions of Each Predictor Variables to Variance in Likelihood to Persist in Model 7 ($N = 141$)

Note. *$p < .05$, **$p < .01$
Implications

Identify Strategies for Increasing Online, Doctoral Persistence that Draws from the Presented Model
Program, Curriculum & Instruction

- Systematic course study that enables students to develop skills and knowledge needed to complete their capstone research project or dissertation (Year 1 - Literature, Year 2 - Research, Year 3 - Analysis)
- A “one stop shop” content management system & collaborative workspace
- Media rich guidance and instruction (e.g. audio feedback)

Academic & Social Integration

- Social media and collaborative conferencing system integration
- Faculty-led content, design, or milestone specific CoPs (e.g. Leader-Scholar Communities)

Familial Integration

- Family orientation
- Social media or collaborative technology integration (e.g., wikis, Facebook, Twitter).

Implications
Implications in Practice & Research

Implications
Implications: “One Stop Shop”
Implications: Collaborative Workspace
Research has demonstrated that the implementation and use of this portal increased doctoral candidates’ connectedness by 9%.


Implications: Collaborative Workspace
Online, doctoral students who receive audio feedback report higher perceptions of teaching presence, cognitive presence, and perceived learning compared to students who only receive text-based feedback (Rockinson-Szapkiw, 2012).

There is a positive relationship between candidates’ use of web-based communication technologies such as Skype, Facebook, and Twitter and sense of connectedness with peers.

Implication: Technology

- Social networks
- Facebook
- Twitter

Continuing to Build the Model and Future Research

{ Additional slides }
Individual Variables

- Personal attributes
  - Demographics
  - Personality
  - Motivation
  - Agency
  - Academic factors

- Autonomous Processes
  - Organization skills
  - Time Management Skills
  - Stress management Skills
  - Research Skills
  - Technology Skills

- Environmental Support and Stress
  - Familial/Social
  - Vocational

- Institutional Variables
  - Financial aid
  - Program, curriculum, & instruction
  - Support services

Integration Variables

- Academic
- Social (Faculty & Peer)
- Economic
- Familial

Online, Doctoral Persistence
Future Research Projects

- A Model for Online Doctoral Persistence (SEM)
- A Model for Explaining the Online, Female Doctoral Candidate’s Negotiation of Her identities and Her Persistence (Grounded Theory)
- Exploring the Intersection between Female Faculty Members' Identities as Mothers and Scholars (Phenomenology)
- Online Doctoral Persistence Questionnaire (Instrument Validation, a doctoral dissertation student)
- Examining the Role of Big Five in Methodology Choice and Persistence (Correlation)
- A Resilient Life After Sexual Exploitation: Understanding How Girls in Uganda Regain their Hope and Dignity
Questions & Answers
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Contact Information
5 Interesting Fact:
 Pet tigers, Thailand
 Paraglided off Coronet Peak - New Zealand
 Learned micro-enterprise bead work while working with trafficking survivors - Uganda
 Tracked lions with two Masai Mara tribesmen - Kenya
 Appeared as an extra on the HIMYM sitcom (Season 8) - California

Learn More About Me?
Visit www.AmandaSzapkiw.com
http://tinyurl.com/doctoral-persistence-model

Presentation Information
Available upon request.

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References