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Lee Stadtlander
Walden University, leann.stadtlander@waldenu.edu

Amy Sickel
Walden University, amy.sickel@mail.waldenu.edu

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Validation of the Doctoral Writing Knowledge and Efficacy Inventory

Lee M. Stadtlander, Ph.D. and Amy E. Sickel, Ph.D.

Abstract

There has not been a validated measure of doctoral level writing knowledge nor one of doctoral writing self-efficacy. In this study we developed and validated the Doctoral Writing Knowledge and Efficacy Inventory. The inventory showed validity, being correlated with writing apprehension, perceived writing self-efficacy, and stage of dissertation.

Problem

There is currently not a valid measure of doctoral level writing knowledge nor one of doctoral writing self-efficacy. In this study we developed and validated the Doctoral Writing Knowledge and Efficacy Inventory (DWKEI) to address the issue on a doctoral level. Writing self-efficacy is the belief in one’s ability to perform tasks required to cope with situations and achieve specific goals. People with high self-efficacy are more likely to take on challenges, try harder, and persist longer than those with low self-efficacy (Bandura, 1989). Students with high writing efficacy tend to write better and be less apprehensive about writing than those with low writing efficacy (McCarthy et al., 1985; Pajares & Valiante, 1999). Previous research, in this area, has tended to examine the K-12 and undergraduate level of writing efficacy (Sanders-Reio et al., 2014); few studies have addressed the issue on a doctoral level. Writing knowledge is an additional correlate with writing task completion (Bromley et al., 2016), and appears to have rarely been studied in doctoral student populations. There is currently not a validated measure of doctoral level writing knowledge or one of doctoral level writing efficacy.

Literature

Social cognitive theory has established the importance of self-efficacy beliefs: one’s confidence in one’s ability to perform tasks required to cope with challenges, try harder, and persist longer than those with low self-efficacy (Bandura, 1989). Students with high writing efficacy tend to write better and be less apprehensive about writing than those with low writing efficacy (McCarthy et al., 1985; Pajares & Valiante, 1999). Previous research, in this area, has tended to examine the K-12 and undergraduate level of writing efficacy (Sanders-Reio et al., 2014); few studies have addressed the issue on a doctoral level. Writing knowledge is an additional correlate with writing task completion (Bromley et al., 2016), and appears to have rarely been studied in doctoral student populations. There is currently not a validated measure of doctoral level writing knowledge or one of doctoral level writing efficacy.

Research Questions

1. Does the Doctoral Writing Knowledge and Efficacy Inventory (DWKEI) show construct validity through correlations with Perceived Self-Regulatory Efficacy for Writing scale (modified from Zimmerman & Bandura, 1994), Writing Apprehension Scale (modified from Daly & Miller, 1975), and the Research Appraisal Inventory (Stadtlander, Giles, & Sickel, 2013)?

2. Does the DWKEI show criterion validity through correlations with stage of dissertation or time in dissertation?

Procedures

To develop the Doctoral Writing and Knowledge Efficacy Inventory (DWKEI), the researchers developed a list of topics relevant to writing a dissertation based on Walden’s Dissertation Guidebook. 80 multiple choice questions were then developed based on these topics. 5 faculty experts provided feedback and suggestions on the questions. Following approval from Walden’s IRB, a pilot study was run with 4 doctoral level students. All participants received a $10 gift card as a thank you.

Data Analysis

Responses to the 42 knowledge questions on the DWKEI were scored and the total for each individual was calculated, resulting in a range of 12-41 correct (M = 31.3, SD = 5.74). Cronbach’s alpha for the knowledge portion was 0.82. The 24 self-efficacy questions were totaled with a range of 53-120 (120 points possible), Cronbach’s alpha for the self-efficacy portion was 0.94.

Findings

Statistically significant correlations were found between the knowledge portion of the DWKEI and the Perceived Self-Regulatory Efficacy for Writing scale (r(80) = .25, p = .03), thus as writing score increased so did writing self-efficacy. A significant relationship was evident with the Writing Apprehension Scale (r(80) = .42, p = .02), whereby as writing scores increased, writing apprehension decreased. Writing score was significantly correlated with stage of dissertation (r(80) = .26, p = .02), number of terms in dissertation was not significant.

Limitations

Participants were recruited through an advertisement in the Walden participant pool and social media sites. Presumably only people interested in the topic were willing to participate. It had a high incompletion rate (37%), presumably due to the length of the surveys. It is possible that people with marginal writing skills became frustrated and dropped out. The inventory is Walden-centric, and may not apply to other populations.

Conclusions

These preliminary results indicate that the DWKEI has construct and criterion validity. Additional research is recommended using different populations. The extent to which the results apply to dissertation students outside of Walden is unknown.

Findings Cont’d

The self efficacy portion of the DWKEI was correlated with terms in dissertation (r(80) = .33, p = .01); stage of dissertation (r(80) = .23, p = .05); writing score (r(80) = .34, p = .01); Perceived Efficacy for Writing (r(80) =-.48, p = .001); writing apprehension (r(80) = .39, p = .001); and research skills (r(80) = .49, p = .001.)

Social Change Implications

A validated doctoral writing inventory provides a reliable method of evaluating student writing, and areas of needed improvement. While additional research is indicated with the DWKEI, it shows promise as such an instrument.

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