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# Testing a path-analytic model of adult dropout in online degree programs

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## ABSTRACT

Using large samples from multiple online degree programs, this study aimed to empirically identify the direct and indirect relationships between major adult dropout factors (i.e., basic scholastic aptitude, physical constraints, interaction with course content, satisfaction, and GPA) and provide educational practitioners with insights that will enable them to indirectly handle uncontrollable adult dropout factors based on the empirical evidence. To achieve these purposes, we formulated and empirically tested a hypothesized path model encompassing multiple hypotheses derived from related literature. We found that the physical constraints variable has statistically significant direct and indirect relationships through interactions with course content, satisfaction, and GPA with adult students' dropout decisions, and the basic scholastic aptitude variable has an indirect relationship with dropout decisions through interactions with course content and GPA. This paper concludes by discussing the implications of our findings for educational practitioners in online degree programs.

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## 1. Introduction

Online learning is a good option for adults with hectic schedules who cannot participate in conventional face-to-face learning due to work, social, and/or family responsibilities. For this reason, many distance learners are non-traditional adult learners (Gravani, 2015; Moore & Kearsley, 2012; Remedios & Richardson, 2013). To provide more adults with learning opportunities, many higher education institutions, including cyber universities, compete to offer a variety of online degree programs as well as non-degree online courses. As a result, the number of adult students enrolled in online degree programs or courses has continuously increased in the U.S. (U.S. National Center for Education Statistics, 2015). Online adult learning has also undergone remarkable growth in South Korea. For example, the number of adult students currently enrolled in cyber universities providing online bachelor degree programs has increased over 10 fold since 2001, when the first cyber university was established in South Korea (Korean Council for University Education, 2015). However, despite increases in both the number of adult distance learners and online programs, high dropout rates remain a serious issue that must be resolved to ensure the consistent vitality of online learning for adults (Park & Choi, 2009).

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Many researchers (Holder, 2007; Lee, Choi, & Kim, 2013; Lim, 2016; Morris, Wu, & Finnegan, 2005; Park & Choi, 2009) have attempted to identify ways to reduce the high dropout rate in online learning. Their studies mainly aimed to reveal the key dropout factors in online programs or courses to induce educational practitioners to appropriately control them and thereby reduce learner dropout rates. Some empirical studies (Choi, 2016; Müller, 2008; Park & Choi, 2009; Rovai, 2003) have focused specifically on the dropout factors of adult students in online learning programs. These studies indicate that adult students' decisions to drop out or persist in online learning is affected by many factors such as learners' scholastic aptitudes, study motives, physical constraints, financial support, encouragement from others, interactions, motivation, academic performance, and so forth. However, most empirical findings provide limited insight into the direct relationships between these variables and dropout decisions and neglect to identify the detailed relationships between the variables. It might be significant to know the direct and indirect effects of key variables on dropout decision because some dropout factors that educational administrators or instructors cannot apparently control can be handled by adjusting intermediate dropout factors. Accordingly, in order to provide educational practitioners with information about the significant factors impacting adult learners' dropout decisions and insights for handling uncontrollable adult dropout factors, this study aims to clearly detail the relationships among the primary factors affecting adult learners' decisions to persist or drop out of online degree programs.

## 2. Literature review

### 2.1. Theoretical framework

Several researchers have attempted to explain the factors affecting an adult distance learner's dropout and/or completion of a distance education courses or programs by proposing their own conceptual models (Choi, 2016; Kember, 1995; Park, 2007; Rovai, 2003). They aimed to propose valid and logical conceptual models based on empirical data and/or thorough reviews of related research findings and theories. First, Kember (1995) Open Learning Model indicated that adult learners' social and academic integrations with conflicting work, family, and social responsibilities are among the most critical factors affecting their successful completion of distance education courses. Kember (1995) model includes factors like students' entry characteristics, external attribution, academic incompatibility, students' course achievement, and cost–benefit decisions, as well as social and academic integration. This model may illuminate the general process by which adult learners successfully complete distance education courses, although it does not provide detailed information about the sub-factors within each categorical factor.

Next, Rovai (2003) Composite Persistence Model organizes a variety of sub-factors that affect adult learners' persistence in distance education courses into four categorical factors: student characteristics prior to admission, student skills prior to admission, external factors after admission, and internal factors after admission. Rovai (2003) attempted to present a comprehensive model to explain adult distance learner dropout by integrating Tinto (1993) Student Integration Model with Bean and Metzner (1985) Student Attrition Model through the addition of some factors related to the skills required by distance students, the special needs of distance students, and the requirements for harmonizing learning and teaching styles. Although Rovai (2003) model offers invaluable insight into why adult distance learners drop out of online courses, it leaves certain critical issues unresolved. Park (2007) pointed out that Rovai (2003) model gives little attention to external factors (e.g., finances, hours of employment, family responsibilities) that could have huge impacts on adult learners' decisions to drop out of online learning programs, suggesting that issues related to the location of external factors, the relationship between external and internal factors, and indirect influences from external factors on adult learners' dropout decisions should be re-examined and properly refined. As a result, Park (2007) proposed a theoretical framework focusing on adult dropout in online non-degree courses.

Choi (2016) recently modified Park's theoretical framework to develop a conceptual model for adult dropout in online degree programs, focusing on a cyber university. He contended that existing models for adult dropout in distance education courses like those of Rovai (2003) and Park (2007) need to avoid the inclusion of overlapping sub-factors within categorical factors and make categorical factors as well as sub-factors more distinct from each other. To resolve these issues, Choi (2016) reorganized and renamed some factors in Park's model and added an outcome factor in his revised model. His model includes learner factors (e.g., age, gender, education level, employment status, basic scholastic aptitude, and motivation for study), external factors (e.g., encouragement from superiors, colleagues, and/or family members, financial support, and physical constraints from work, family, and/or personal issues), internal factors (e.g., academic integration, social integration, technology issues, and motivation), and outcome factors (e.g., GPA) as the meaningful factors affecting adult students' decisions to persist or drop out of online degree programs.

### 2.2. Study variables

On the basis of the theoretical frameworks established in previous studies, we adopted some of the main factors affecting adult dropout in online degree programs. These factors include basic scholastic aptitude, physical constraints, interaction with course content, motivation in terms of satisfaction, and GPA. Below, we explain why we chose these five factors and provide empirical evidence of the connections between the two exogenous variables and the other variables.

First, a majority of related previous studies reported that learner factors (or learner characteristics), such as academic preparation, relevant experiences, and learning skills, are among the main factors predicting distance learner dropouts

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