

Seen in a New Light: Patterns of Adult Participation in Higher Education

David S. Stein, Lynn A. Trinko, and Constance E. Wanstreet
The Ohio State University

Keywords: decision-making process, higher education, predicting enrollment, social capital, workforce development

Abstract: This study identified length of time out of school and institutional support among the factors associated with the decision to enroll in a higher education degree program. The study suggests that considering participation in the context of social capital can help adult educators better understand enrollment decisions.

Introduction

Adult learners account for almost half of higher education enrollments in the United States; and in the next decade, they may exceed the number of traditional-age college entrants (Kim, Collins, Williamson, & Chapman, 2004). The factors that motivate adults to enroll in higher education assume more importance as institutions adapt to a changing body of learners. However, there is an absence of solid data about these students and potential students.

This study identified factors workforce development professionals considered when deciding to enroll in a degree/licensure program offered by the Workforce Development and Education section at a large Midwestern university. The study attempted to validate the PRiSM decision model for adult enrollment, which is based on indicators derived from the literature on adult participation and retention in higher education (Stein & Wanstreet, 2006).

Specifically, the study explored this primary research question: What is the factor structure underlying the decision to enroll in a credentialing program in workforce development and education? A secondary research question was also addressed: How well does a model derived from the participation literature explain how adults make the decision to enroll in a long-term credentialing program in workforce development and education?

Trends in Participation Studies

During nearly 50 years of study of adult enrollment patterns, five movements have emerged that reflect changes in research emphasis. The first movement had a strong occupational orientation (Houle, 1961; Johnstone & Rivera, 1965) and portrayed motives to improve occupational and financial status through better jobs operating independently of institutional, environmental, and other contextual factors in the adult life world. Those motives continue throughout the stream of research as powerful and enduring reasons for adult participation in educational programs.

The second movement was related to developing instruments to measure the motivational orientations/attitudes toward participating in adult education. The Education Participation Scale (Boshier & Collins, 1985), the revised Attitudes Toward Continuing Education Scale (Blunt & Yang, 2002), and the Deterrents to Participation Scale (Scanlan & Darkenwald, 1984) are among the instruments that sought to uncover the predisposing factors that might be associated with adult enrollments in a learning program.

A third movement was the development of models and theories to illustrate the decision-making process used by adults to choose when and where to enroll in an educational program (Cross, 1981; Smart & Pascarella, 1987). Models are useful in portraying the adult learner as an information seeker and evaluator of multiple factors, including impact on family, job circumstances, role expectations, perceived benefits, and costs.

The fourth movement describes issues of retention and decision-making processes (Kasworm, Sandmann, & Sissel, 2000; O'Donnell & Tobbell, 2007). The literature has illustrated the importance of institutional supports necessary to both recruit and retain adult learners.

A fifth movement is the application of participation literature to distance education credit courses. While not very different from the issues adult learners confront in walled institutions, unique aspects of learning in a virtual environment do influence the decision to participate and persist (Fjortoft, 1996; Kemp, 2002).

The five movements reflect a continuous interest in the phenomena of adult enrollment patterns. However, the literature has concentrated on the course level of participation and has not described patterns related to the decision to enroll and commit to a degree program. In addition, the research has not focused on predicting enrollments as much as it has focused on describing patterns of enrollment in courses. Our reading of the literature suggests that the decision to enroll in a course of study is a complex, multifaceted process.

In line with the model-building movement, Stein and Wanstreet (2006) have proposed a conceptual model from the literature describing the factors adults consider when deciding to enroll in higher education. The PRiSM model was an attempt to synthesize major findings from the participation literature. The participation literature suggests that models have been built from data. However, given the body of knowledge that has accumulated over the years, we ask how well our knowledge can be used to predict enrollments in formal adult education programs requiring a substantial commitment of time, energy, and fiscal resources. This study tests a model against the data. How this model works in the empirical world with adult students interested in returning to study in a degree-granting program in workforce development and adult education is the question for this study.

Method and Procedures

This study identified factors adults consider when deciding to enroll in a degree/licensure program. The accessible population included 421 adults with e-mail addresses who had inquired about admission or applied to any of the credentialing programs offered by the Workforce Development and Education section at a large Midwestern university between 2003 and 2006. A questionnaire developed by the researchers was sent via e-mail to the accessible population in September 2006. Two follow-up questionnaires were sent in October 2006.

Questionnaire Responses

From an accessible population of 421 workforce development professionals, 75 questionnaire responses were received. Participation was on a voluntary basis with no incentives to motivate completion, which may account for the 18% response rate. One questionnaire was too incomplete to be used. In the case of 13 questionnaires with between one and six answers missing, mean substitution was used. Respondents included 47 females and 28 males. Ages at the time of the decision to enroll ranged from 18 to 60, with a mean age of 37 for women and 35 for men. Forty-nine respondents enrolled in a workforce development credentialing program, of

whom 21 were males and 28 were females. Twenty-six respondents did not enroll (seven males and 19 females). Six of the 26 respondents who did not enroll planned to do so at a later time.

Results

Factor Structure

Common factor analysis of 48 self-report enrollment decision items was conducted to assess the factor structure underlying the decision to enroll. The analysis used a maximum likelihood extraction method and a promax rotation to determine which factors were correlated. The Kaiser-Meyer-Olkin measure of sampling adequacy was .724, indicating that the correlations were adequate for factor analysis (Meyers, Gamst, & Guarino, 2006). Similarly, Bartlett's test of sphericity was significant ($p < .001$), indicating sufficient correlation between the variables to proceed with the analysis (Meyers et al., 2006).

Using the Kaiser-Guttman retention criterion of eigenvalues greater than 1.0 resulted in an 11-factor solution that accounted for 76% of the total variance. However, an examination of the scree plot indicated that five factors, all with eigenvalues greater than 2.0, accounted for 57% of the total variance with the remaining factors providing diminishing returns. Therefore, a five-factor solution was chosen since it provided the clearest extraction. Communalities were high for each of the items, ranging from .656 to .913. Cronbach's coefficient alpha is .93 for Factor 1, .86 for Factor 2, .81 for Factor 3, .64 for Factor 4, and .56 for Factor 5, indicating good subscale reliability for the first three factors.

Results indicate that the conceptual, literature-derived, four-factor PRISM model evolved to an empirical, five-factor PRISM model, with Institutional Support emerging as a separate factor from the conceptual model (see figure 1).

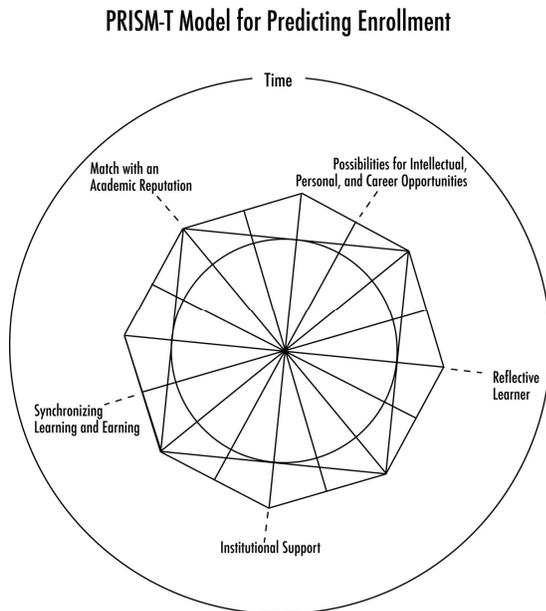


Figure 1. Empirical model of the factors related to the decision to enroll in a workforce development credentialing program.

Predicted Enrollment

The second research question examined how well the five-factor PRISM model predicted enrollment. Logistic regression with simultaneous entry was used to predict group membership; i.e., group enrolled or group not enrolled. The predictor variables used in the initial regression model are the scores for Possibilities for Intellectual, Personal, and Career Opportunities; Institutional Support; Synchronizing Learning and Earning; the Reflective Learner; and Match with an Academic Reputation.

Prediction success for the cases used in the model was moderate, with an overall prediction success rate of 68% and correct prediction rates of 86% for WDE professionals who enrolled in a postsecondary workforce development academic program and 35% for those who did not enroll. The Nagelkerke pseudo R^2 indicated that the model accounted for 15% of the total variance in the decision to enroll.

Because the literature suggested that timing of the decision is important, a second analysis was conducted adding Length of Time Out of School Before Enrolling (based on the median score of 6, this variable was coded 0 = 1-6 years, 1 = 7+ years). The Nagelkerke pseudo R^2 indicated that the model accounted for 22% of the total variance in the decision to enroll. Prediction success increased, with an overall prediction success rate of 73%. Correct prediction rates increased to 91% for WDE professionals who enrolled in a postsecondary workforce development academic program, while the prediction rate for those who did not enroll remained at 35%.

The odds of estimating correctly which workforce development professionals enroll in higher education improve by 145% if they have been away from school for seven or more years. In addition, if workforce development professionals perceive a match with the institution's reputation, the odds of estimating enrollment correctly improve by 25%. Institutional support improves the odds of estimating enrollment correctly by 5%. Table 7 also shows the regression coefficients (B), the Wald statistics, significance level, and the 95% confidence intervals (CI) for odds ratios for each predictor.

Discussion

The PRISM-T Model

The PRISM-T model recognizes the decision-making process in the context of time. With women in this study having a mean age of 37 and men a mean age of 35, time out of school implies that the participants have experience in their field and are ready to take advantage of learning opportunities that are focused on career advancement. Time may also indicate a building of supportive networks that encourage participating in a credentialing program in higher education. While the job-related notion of adults returning to school is prevalent in the participation literature, this study suggests that it is one of many factors learners may consider. In addition, middle-aged adult learners have had time to settle child-rearing and other life issues before making a long-term commitment to a special field and a specific program. In the context of predicting enrollment in a workforce development credentialing program, the present study identified six variables: time out of school; possibilities for intellectual, personal, and career opportunities; institutional support; synchronizing learning and earning; reflective learner; match with an academic reputation.

Extending the Conceptual Framework

Adult learning in the United States has a decidedly individualistic nature. Learning is often described as increased knowledge and skill and often measured as individual ability to perform in the organizational (Schied, 2001) and social world (Jeria, 2001). This knowledge is often acquired through formal learning. However, enrollment in formal learning programs is the result of an interaction among situational, occupational, and institutional factors rather than primarily a desire or need to acquire knowledge as a commodity. We suggest that enrollment in formal higher education is a decision made on the basis of existing social capital, networks of community, family, occupational support, and acquired educational capital.

Social capital, according to Niemela (2003), builds as adults cooperate with each other in the accomplishment of shared goals, use resources to create networks, become engaged with each other, and take responsibility for the issues affecting their lives and the good of the community. The degree to which individuals engage with and support each other is the degree to which social capital increases. Social capital includes the knowledge and networking resources that reside in and are available for adults to use toward the common good. Social capital becomes a resource for continued learning. Therefore, the PRISM-T model illustrates that an adult's decision to participate in higher education may be influenced by the resources one has acquired from past educational, occupational, and social situations and the educational opportunities can be perceived as the means as how one leaves a network or community behind. Thus, when making a decision to enroll in higher education often the participant needs to consider what they are "leaving" behind.

Participation in higher education may be seen as threatening the norms and stability of one's local network. This study suggest the likelihood that learners have an image of themselves as professionals and their professional image and how that image fits within the institution. Completion of the program in a reasonable amount of time without compromising other personal obligations is equally important. Within the context of the decision making process, it is imperative that the professional consider all of the dynamics that affect this decision. The PRISM-T model also suggests that the decision to enroll in a long-term commitment is a negotiated activity in which self-interests are balanced among various other interests, including the employer, family, friends, and identity as a learner. Policies directed toward increasing the number of adult learners in degree programs must take account of the complex social environment in which the adult life is embedded.

To assist adult learners in reflecting on and building their social capital, postsecondary institutions might: (a) communicate the benefits of enrolling in terms of a return to the community (or family, or business), (b) reinforce the message that further education will help adults cope with technology, (c) help adult learners understand that relationships at work will change and provide support when the changes occur, and (d) show that other learners like them are in the program and that new supportive networks can be built and social capital can be acquired through participation in formal education. Institutions should help adults work through these issues in the context of their timing in the adult's life.

We suggest, therefore, that social capital is emerging as a sixth movement in the study of adult participation in postsecondary education. Social capital can help us explore how adults build supportive and restrictive networks concerning participation in long-term credentialing

programs. Our adult lives are embedded in powerful and overlapping networks. Understanding how networks influence enrollment decisions may show the interlocking relationships that mold adult life.

References

- Blunt, A. & Yang, M. (2002). Factor structure of the Adult Attitudes Toward Adult Education Scale and its capacity to predict participation behavior: Evidence for adoption of a revised scale. *Adult Education Quarterly*, 52, 299-314.
- Boshier, R., & Collins, J. B. (1985). The Houle typology after twenty-two years: A large-scale empirical test. *Adult Education Quarterly*, 35, 113-130.
- Cross, P. K. (1981). *Adults as learners: Increasing participation and facilitating learning*. San Francisco: Jossey-Bass.
- Fjortoft, V. (1996). Persistence in a distant learning program: A case in pharmaceutical education. *American Journal of Distance Education*, 10, 49-59.
- Houle, C. O. (1961). *The inquiring mind*. Madison, WI: University of Wisconsin Press.
- Jeria, J. (2001). The political economy of adult education: Implications for practice. In V. Sheared & P. Sissel (Eds.), *Making space: Merging theory and practice in adult education* (pp. 314-325). Westport, CT: Bergin & Garvey.
- Johnstone, J., & Rivera, R. (1965). *Volunteers for learning: A study of educational pursuits of adults*. Hawthone, NY: Aldine Press.
- Kasworm, C., Sandmann, L., & Sissel, P. (2000). Adult learners in higher education. In A. Wilson & E. Hayes (Eds.), *Handbook of adult and continuing education*. (pp. 449-463). San Francisco: Jossey-Bass.
- Kemp, W. (2002). Persistence of Adult Learners in Distance Education. *The American Journal of Distance Education*, 16(2), 65-81.
- Kim, K., Collins, H. M., Williamson, J., & Chapman, C. (2004). *Participation in Adult Education and Lifelong Learning: 2000-001*. (National Center for Education Statistics Publication No. NCES 2004050). Washington, DC: U.S. Government Printing Office.
- Meyers, L. S., Gamst, G., & Guarino, A. J. (2006). *Applied multivariate research: Design and interpretation*. Thousand Oaks, CA: Sage.
- Niemela, S. (2003). Education for social capital. *Lifelong Learning in Europe*, 8(1), 37-42.
- O'Donnell, V. L., & Tobbell, J. (2007). The transition of adult students to higher education. *Adult Education Quarterly*, 57, 312-328.
- Scanlan, C. S., & Darkenwald, G. G. (1984). Identifying deterrents to participation in continuing education. *Adult Education Quarterly*, 34(3), 155-166.
- Schied, F. (2001). Struggling to learn, learning to struggle: Workers, workplace learning and the emergence of human resource development. In V. Sheared & P. Sissel (Eds.), *Making space: Merging theory and practice in adult education* (pp. 123-137). Westport, CT: Bergin & Garvey.
- Smart, J. C., & Pascarella, E. T. (1987). Influences on the intention to reenter higher education. *The Journal of Higher Education*, 58(3), 306-322.
- Stein, D. S., & Wanstreet, C. E. (2006). Beyond yes or no: Factors in adults' decisions to enroll in higher education. *Journal of Continuing and Higher Education*, 54(2), 2-12.