RETAINING COLLEGE STUDENTS: THE ROLE OF STUDENT READINESS AND PARTICIPATION

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Student retention has deep-seated consequences for students themselves at different stages of life, for institutions of higher education, and for other stakeholders. This research conceptualizes and empirically tests a model of relationships that begin with the effects of student readiness constructs on student participation, and continue with the influence of student participation on student satisfaction, grades, and retention. The empirical study undertaken to test these relationships combined self-report survey data with "objective" data about student behavior in online courses, and provided general support for the conceptual model. The findings, along with implications and limitations, are discussed.

INTRODUCTION

Since societal problems such as unemployment rate, financial bankruptcy, poverty, and family struggles often link back to uncompleted college education, it is critical to examine student retention as well as the role of higher education institutions in retaining students (Isakova, Nazarbekova, & Tiulegenov, 2011). Individuals without a college degree have fewer opportunities to make money, establish connections for a career path, and lead happy and healthy lives. For example, among people married between 1990 and 1994, divorce rates are twice as high for those who did not attend college compare to those who did attend (Lloyd, 2014). In addition, people with only a high school diploma are nearly twice as likely to be in poorer health relative to college graduates (Lloyd, 2014; Unal, 2013).

Many societal problems associated with lack of education warrant investigation into means of improving retention. In addition, active coursework participation is pivotal to student success, retention and completion. Davies and Graff (2005, p.663) report that "students who failed in one or more modules, did interact less frequently than students who achieved passing grades." In fact, learning is improved when learners actively participate in the course (Bento & Schuster, 2003; Hrastinski, 2009).

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Increased participation in part requires preparing students for course requirements prior to entering the course. In the marketing literature, researchers argue that customers need to know what the service requirements are (Kellogg, Youngdahl, & Bowen, 1997), and that participation will decrease due to insufficient readiness (Larsson & Bowen, 1989; Bettencourt, Ostrom, Brown, & Roundtree, 2002; Dellande, Gilly, & Graham, 2004). Similarly, in educational services, students need to be informed and prepared to face course requirements.

Given its importance, we focus on student readiness factors, their effect on student participation and subsequent student outcomes. In particular, this research aims to explore: (1) the interplay between student readiness and student participation, (2) the effect of participation on grade and satisfaction; and (3) the significance of grade and satisfaction for student retention. The empirical study undertaken to test these relationships combines self-report survey data with "objective" data about student behavior in online courses, and provides plausible findings underscoring the roles of student readiness and participation in determining student grades, satisfaction and retention.

THEORETICAL FRAMEWORK AND CONCEPTUAL MODEL

Antecedents of Participation

Customer participation has been defined as "the degree to which the customer is involved in producing and delivering the service" (Dabholkar, 1990, P. 484). Customer participation has been one of the significant themes in services marketing research for the past 40 years (e.g. Lovelock & Young, 1979; Bitner, Faranda, Hubbert, & Zeithaml, 1997; Grönroos, 2008; Mustak, Jaakkola, & Halinen, 2013). Over these decades, important changes in both the marketplace and marketing thought suggest that customers are integral co-creators of services and that customer participation has profound implications for the ends that marketers and customers seek to achieve (Wikström, 1996; Prahalad & Ramaswamy, 2004; Heinonen et al., 2010; Mustak et al., 2013). In fact, the co-creative roles of customers have compelled researchers to view them as "partial employees" of the organization. Building on the original users of the term (e.g., Lovelock & Young, 1979; Mills, Chase, & Margulies, 1983), Halbesleben & Stoutner (2013) and Manolis, Meamber, Winsor, and Brooks (2001) recommend that service firms can increase efficiency and effectiveness by co-opting customers and socializing, educating and empowering them as partial employees.

Similarly, in educational services, researchers argue that student participation is critical to satisfactory education outcomes (Hew & Cheung, 2012; Palincsar & Herrenkohl, 2002). Instructors are increasingly adopting a facilitator role and leveraging student participation for course delivery. For example, lecture courses are increasingly implementing group work as an important means of increasing participation. Student participation emphasizes the negotiation of meaning and ideas between participants (Dillenbourg, 1999; Palincsar & Herrenkohl, 2002; Roschelle, 1992; Roschelle & Teasley, 1995; Stahl, Koschmann, & Suthers, 2006). Given the importance of participation in higher education, the study of its antecedents is critical.

Research shows that customers may resist performing a new activity due to the discomfort in dealing with new tasks (Parasuraman, 2000; Lin & Hsieh, 2006). Readiness has the potential to decrease the awkwardness in dealing with new tasks by increasing customer propensity to embrace participation in services that assist them in accomplishing their goals (Parasurman, 2000). Participation will occur more frequently and extensively if customers are ready. Though extensive research has been done on customer readiness, this construct has not been understood in relation with participation (Meuter, Bitner, Ostrom, & Brown, 2005; Dellande, et al., 2004; Bettencourt et al., 2002).

Scholars have conceptualized customer readiness as a construct consisting of role clarity, ability and motivation (Meuter et al., 2005). Role clarity refers to customer awareness of their role, what they should do, and their knowledge of what to do. Easingwood (1986) reports that 89% of firms have problems with employee or customer confusion over their roles. Customer confusion is due to the perceived uncertainty and lack of role clarity. Scholars argue that customers need to be informed about what the service requirements are (Kellogg, et al., 1997, Yi & Gong, 2013; Yi, 2014). Customer participation will decrease when customers do not have a sufficiently developed understanding of their role in the service process (Larsson & Bowen, 1989). Similarly, research in higher education suggests that students generate relatively more discussion messages (e.g., comments, questions, other posts) if they receive, comprehend and follow clear guidelines on how to do so (Choi, Land, & Turgeon, 2005).

Additionally, when customers have the ability (i.e., necessary skills) to complete a task, they are more likely to participate. Even though having the capacity or ability to complete a task is not the same as actually doing it, possessing the required skills makes participation a more likely event. According to Seltzer (1983), individuals will not become involved in an activity when they believe that they are unable to perform a task required by that activity. Consequently, ability is a critical component of customer readiness. Bettencourt et al. (2002) show that, in knowledge intensive business services, successful participation is a

consequence of customers having the necessary abilities. For example, research in higher education suggests that student participation in online discussion is highly dependent on their ability to come up with constructive comments (e.g., Arend, 2009; Chapman, Storberg-Walker, & Stone, 2008; Fung, 2004; Dennen, 2005; Guzdial & Turns, 2000; Khan, 2005).

When role clarity and ability is joined by motivation, the necessary and sufficient conditions for customer participation may exist. Customer ability and role clarity do not necessarily lead to participation. In fact, customers might not be sufficiently motivated to take action toward a service requirement. Research shows the tendency to perform required tasks depends on customer motivation in the production of services (Larsson & Bowen, 1989; Vroom, 1964). Drawing on prior findings, we hypothesize that student role clarity, ability, and motivation are conducive to student participation:

H_{1a}: Student role clarity is positively associated with student participation

H_{1b}: Student ability is positively associated with student participation

H_{1c}: Student motivation is positively associated with student participation

The sequence of role clarity, ability and motivation in developing customer readiness has also received scholarly attention. Bowers, Martin, and Luker (1990, p.62) propose a three-part sequence to improve participation; "Step 1: Define the customer's job. Step 2: Train the customer to perform his or her job. Step 3: Retain the valuable customer by rewarding the customer for a job well done." Essentially, they argue that role clarity supports ability, which in turn fuels motivation. In hospital settings, Dellande et al. (2004) find that patients who are not clear about their role in the service process are unable to acquire the needed skills to carry out the tasks required of them. Moreover, patients will become frustrated and will lose their motivation if they are not able to perform expected behaviors. Accordingly, we expect (1) students' role clarity to enhance their ability to perform the expected tasks; and (2) their enhanced ability to increase the motivation underlying their performance.

H_{2a}: The higher the student role clarity, the more able the student to perform the expected tasks.

H_{2b}: The higher the student ability, the more motivated the student to perform the expected tasks.

Consequences of Participation

Learning outcome depends on interaction with the content and with others (i.e., instructor and peers) within the online learning environment (see e.g. Duffy & Kirkley, 2003; Anderson, 2003; Lee & Gibson, 2003). Education literature views interaction with the content and with others as student participation (Hew & Cheung, 2012; Palincsar & Herrenkohl, 2002; Moore, 1989). Student participation facilitates the negotiation of meaning and ideas with others (Stahl, Koschmann, & Suthers, 2006), joint construction of knowledge, and shared cognitive understanding of materials (Dillenbourg, 1999; Ploetzner, Dillenbourg, Preier, & Traum, 1999). Participation enables students to achieve a deeper understanding of the course content (Anderson, 2003). Thus, we expect learning outcome to be associated with student participation.

Academic grading in the United States is mostly in the form of letters ranging from A to D and F. Grade serves as a formal evaluation of student work and determines the level of work proficiency. Criteria for grading is based on instructional design; generally defined as a developmental instructional system and based in learning and instructional theory (Gros, 1997). Grades are the most predominant measure of student learning outcome (Hiltz & Wellman, 1997; Dumont, 1996). As such, we hypothesize:

H_3: Student participation is positively associated with student grades.

Customer Satisfaction is "a customer's post-consumption evaluation of a product or service" (Mittal & Frennea, 2010, p. 3) that occurs if the perceived performance of a product or service meets or goes beyond his or her prior expectations (e.g., Bearden & Teel, 1983; Oliver, 2010). Customer satisfaction has been a central construct in marketing literature (e.g., Luo & Homburg, 2007; Szymanski &

Henard, 2001). Previous research shows that customer satisfaction positively influences important customer outcomes such as customer loyalty and willingness to pay (Seiders, Voss, Grewal, & Godfrey, 2005; Homburg, Koschate, & Hoyer, 2005). Most firms contend that managing customer satisfaction is a "strategic imperative" (Mittal & Kamakura, 2001, p. 131) and make substantial investments to pursue customer satisfaction (Simester, Hauser, Wernerfelt, & Rust, 2000; Yu, Kim, Yoon, & Park, 2015). To the extent that these imperatives also apply to institutions of higher education, they ought to pursue student satisfaction as one of their priorities.

Active participation by customers can reveal their needs and expectations to service providers, enabling the two parties to increase the co-created value (Mustak et al., 2013). In higher education, if students actively participate in the course, instructors will be more likely to recognize their weaknesses and strengths and have the opportunity to take corrective action. Throughout the participation process, the interactions between the service provider and the customer will improve and reinforce the understanding of customer needs and expectations, eventually contributing to customer satisfaction (Auh, Bell, McLeod, & Shih, 2007). Research shows that participation, especially in high-involvement service contexts where customers spend considerable time and effort, often leads to higher customer satisfaction (Bloemer & Ruyter, 1999). As such, we hypothesize:

H_4: Student participation is positively associated with student satisfaction.

Declining enrollment is an issue in higher education institutions (Hersh & Merrow, 2015), and increased attrition creates a plethora of problems for all stakeholders (Tinto 1993). Research shows that attrition rates in online courses are higher than face-to-face courses in part because it is relatively more difficult to achieve student satisfaction in online courses (Waugh & Su-Searle, 2014). One of the critical factors that can help retain customers in both face-to-face and online education is customer satisfaction (see e.g. Petruzzellis, D'Uggento, & Romanazzi, 2006). Greater service satisfaction engenders greater retention rates (Siu, Zhang, & Yau, 2013; Han & Hyun, 2015). The association between satisfaction and retention is clearly supported in marketing literature (Oliver, 1980; Oliver & Swan, 1989; Jones, Mothersbaugh, & Beatty, 2000; Siu et al., 2013; Han & Hyun, 2015). This finding is also echoed in higher education literature (e.g., Hoyt, 1999; Tinto, 1987; Lau, 2003). In online courses, for instance, students who are satisfied with their experience are more likely to take another online course (Roberts-DeGennaro & Clapp, 2005). Drawing on these arguments, we hypothesize:

H_5: Student satisfaction is positively associated with student retention.

In addition to their mediated relationship, motivation and retention are linked directly, as well. Students should be motivated to continue their enrollment. In fact, "To be motivated means to be moved to do something" (Ryan & Deci, 2000a, p. 54). In other words, motivation is an unceasing requirement if students are to stay in the program. Similarly, in the health care context, researchers have observed that patients who exhibit higher treatment motivation stay and successfully complete longer treatment plans (Stevens, Verdejo-García, Roeyers, Goudriaan, & Vanderplasschen, 2015). Since retention is ultimately dependent on the individual student, the level of his or her motivation is critical (Lau, 2003). Thus, we hypothesis:

H_6: Student motivation is positively associated with student retention.

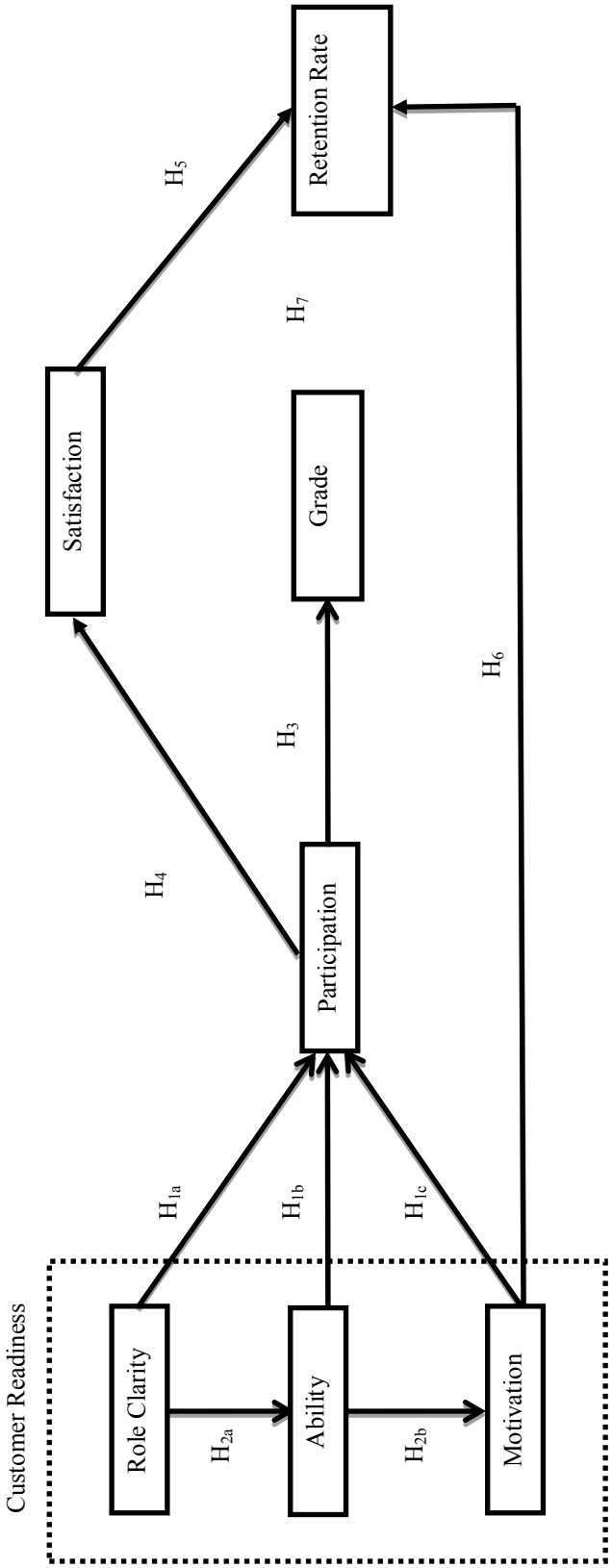
Empowering student to achieve better grades is an effective means of retaining them. In fact, many scholars consider grades to serve as a key partial mediator of the relationship between participation and retention (Wetzel, O'Toole, & Peterson, 1999; Konyu-Fogel & Grossnickle, 2013). Unsatisfactory grades discourage students from returning to school for another year or even for another course (Lau, 2003). Thus, we hypothesize:

H_7: Student grades are positively associated with student retention.

METHODOLOGY

A combination of archival and survey data is used to empirically test the proposed relationships in this study. The participants in this research were students over the age of 18 at

FIGURE 1:
The Conceptual Model



a public university situated in Southwest United States. During two academic semesters, students enrolled in online courses were asked to complete an online questionnaire that would generate the survey portion of the data (i.e., role clarity, ability, motivation, satisfaction, and retention). The remainder of the data was generated by tracking student inputs and academic performance in the respective courses using the resources of the university's *Center for Online Learning, Teaching and Technology*. A total of 216 responses were collected from 6 online courses in fall 2014, and 243 responses were collected from 11 online courses in fall 2015. Of these, 331 responses were sufficiently complete and, thus, retained for analysis.

To increase the validity and reliability of the results of this study, all the survey items were adapted from previously validated scales (Straub, 1989). An expert panel was formed with the help of five faculty and Ph.D. students to validate the content of the scale items (role clarity, ability, and motivation), which were borrowed from past research and adjusted to fit the college education context.

Student readiness items were measured on a 7 point Likert scale that ranged from "Strongly Disagree" to "Strongly Agree;" while satisfaction and retention items were measured on 7-point semantic differential scales (See Table 1). Student participation and grades were represented by the actual student role in the respective courses and the actual grade they earned. Specifically, participation was captured by tracking a variety of student inputs within the online course environments (i.e., Blackboard). These inputs included (1) hits: the number of times students logged in the course and clicked on different content areas within the course; (2) posts: the number of messages students posted in online discussions forums; (3) length: the average length of the posts in online discussions forums; and (4) time: the amount of time spent within the online course.

DATA ANALYSIS

Instrument Validation

Partial Least Squares (PLS) SEM was used to analyze the data. The confirmatory factor analysis output presented in Table 1 demonstrates an acceptable underlying structure across the measures (i.e., pattern of main and cross loadings). Next, the measurement scales were checked for convergent validity, discriminant validity, and reliability. All estimated loadings were above 0.6. Also, as shown in Table1, the average variance extracted (AVE) exceeded the threshold of 0.5 for all the constructs (Fornell & Larcker, 1981). These provide support for convergent validity. To examine discriminant validity, the AVE for each construct was compared to the squared correlations of that construct with other constructs (Hair, Ringle, & Sarstedt, 2011). Since AVEs were larger than squared inter-construct correlations, discriminant validity is supported (See Table2). As shown in Table 1, Cronbach's alpha and composite reliability for all the constructs were above the threshold of 0.7 (Chin & Gopal, 1995).

Structural Model and Hypothesis Testing

PLS SEM was used to test the proposed model of relationships. PLS entails a mathematically rigorous computation to determine the optional linear relationships between latent (theoretical) variables. The PLS-SEM is used because of its suitability for relatively small sample size, focus on prediction (Reinartz, Haenlein, & Henseler, 2009), and the complexity of the model.

H_{1a}, H_{1b} and H_{1c} hypothesized the positive effects of student readiness constructs (i.e., role clarity, ability and motivation) on participation. The results support H1a (β=.09; p<.05) and H_{1b} (β=.18; p<.01), but H_{1c} is not supported (β=.03; p=.35). H_{2a} and H_{2b} hypothesized a sequence of effects among student readiness constructs. H_{2a} is supported as role clarity is positively and significantly associated with ability (β=.52; p<.01). H_{2b} is also supported with ability and motivation being positively and significantly associated (β=.49; p<.01). H_3 predicted the positive effect of participation on grades. Results provide support for that hypothesis (β=.38; p<.01). Consistent with H_4, the positive effect of participation on satisfaction was also statistically significant (β=.14; p<.01). H_5, H_6 and H_7 pertained to the positive effects of satisfaction, motivation and grades on student retention, respectively. In support of H_5 and H_7, satisfaction (β=.47; p<.01) and grades (β=.52;

TABLE 1:
Scale Items and CFA Loadings

Scale Items	Loading
Role clarity (AVE=.64; CR=.87; α=.81)	
I feel certain about what I should do in this online course.	0.79
I am NOT sure what to do in this online course. (RC)	0.8
I know what is expected of me in this online course.	0.77
The process of this online course is clear to me.	0.82
I believe there are only vague directions regarding what I should do in this course. (RC) [a]	N/A
Ability (AVE=.64; CR=.90; α=.86)	
I am fully capable of completing the requirements of this course.	0.83
I am confident in my ability to complete this course.	0.86
This course is well within the scope of my abilities.	0.87
I do NOT feel I am qualified to take this course. (RC)	0.69
My past experiences increase my confidence that I will be able to successfully complete the requirements of this course.	0.75
In total, this course involves things that are more difficult than I am capable. (RC) [a]	N/A
Extrinsic motivation (AVE=.59; CR=.93; α=.91) for the 2nd order motivation construct.	
Taking this course online would provide me with added convenience.	0.8
Taking this course online would allow me to study from wherever I am.	0.84
Taking this course online would allow me to study whenever I want.	0.81
Taking this course online would provide me more control over the studying process.	0.86
Intrinsic motivation (AVE=.59; CR=.93; α=.91) for 2nd order motivation construct.	
Taking this course online would provide me with personal feelings of worthwhile accomplishment.	0.88
Taking this course online would provide me with feelings of enjoyment from using the technology.	0.89
Taking this course online would provide me with feelings of independence.	0.88
Taking this course online would allow me to feel innovative in how I interact with others in the course.	0.87
Taking this course online would allow me to have increased confidence in my skills.	0.87
Participation	
# of posts	0.63
Time spent	0.84
# of hits [a]	N/A
Average post length [a]	N/A
Satisfaction (AVE=.92; CR=.97; α=.96)	
Dissatisfied…Satisfied	0.97
Displeased…Pleased	0.96
Unfavorable…Favorable	0.95
Retention (AVE=.90; CR=.97; α=.96)	
Unlikely…Likely	0.96
Very improbable…Very probable	0.96
Impossible…Possible	0.93
No chance…Certain	0.95

[a] Item was deleted in the process of the analysis

TABLE 2:
AVEs and Squared Inter-construct Correlations

	M	SD	1	2	3	4	5	6	7
1. Role clarity	5.79	0.97	.64						
2. Ability	6.07	0.82	.27	.64					
3. Motivation	5.87	0.96	.18	.24	.60				
4. Participation	38.67[a] 37.47[b]	29.19[a] 28.32[b]	.02	.04	.003	1.00			
5. Grade	2.88	1.18	.03	.07	.03	.15	1.00		
6. Satisfaction	6.28	1.03	.18	.19	.29	.02	.05	.92	
7. Retention	6.40	1.10	.13	.15	.35	.00	.05	.44	.90

[a] Number of posts [b] Time spent Values on the diagonal line are AVEs, and the remainders are squared inter-construct correlations.

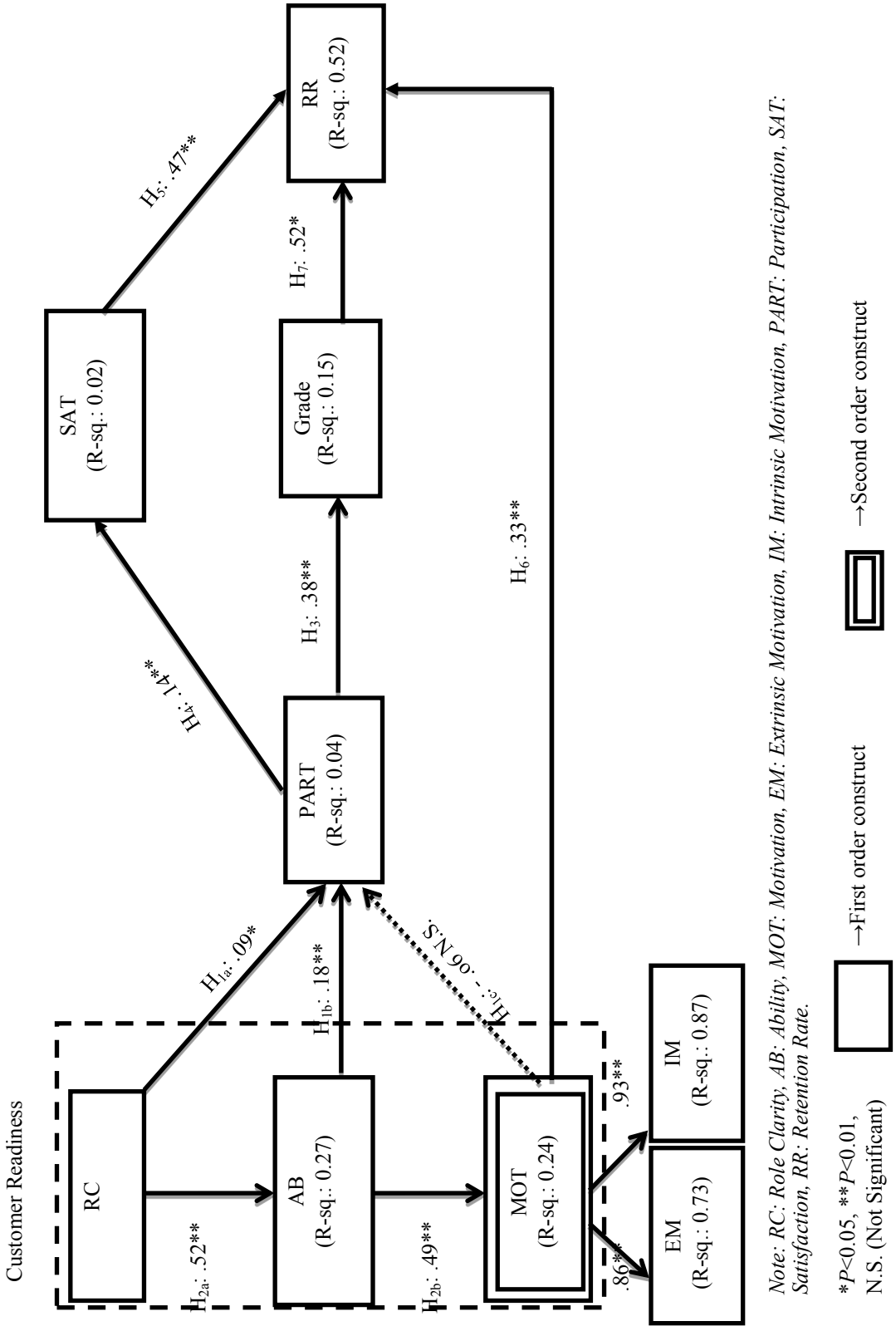
$p<.01$) emerged as statistically significant predictors of student retention with strong effect sizes. Finally, the association between motivation and student retention was statistically significant ($\beta=.33$; $p<.01$), as well, providing support for H_6. Variance explained in ability, motivation, participation, satisfaction, grades, and retention as endogenous variable were .27; .27; .14; .12; .15; and .52, respectively.

DISCUSSION AND CONCLUSION

Student retention has deep-seated consequences for students themselves at different stages of life, for institutions of higher education, and for other stakeholders (Isakova et al., 2011; Lloyd, 2014; Unal, 2013). Indeed, many societal problems associated with lack of education warrant investigation into means of improving retention. In addition, active coursework participation is pivotal to student success, retention and completion. In this research, we turned to the role of student participation as a key component in models and theories where retention is the focal outcome construct. This paper conceptualized and empirically tested a model of relationships beginning with the effects of student readiness constructs on student participation, and continuing with the influence of student participation on student satisfaction, grades, and retention. The empirical study undertaken to test these relationships combined self-report survey data with "objective" data about student behavior in online courses, and provided general support for the conceptual model. Specifically, role clarity and ability as two student readiness constructs facilitate and boost student participation behaviors. Student participation, in turn, emerged as a determinant of student grade, and an important source of student satisfaction. These two consequences of participation (i.e., grades and satisfaction), along with motivation, explain a considerable portion of the variation in student retention.

Our findings have implications for various stakeholders such as students, institutions of higher education, and policy makers. First and foremost, students should be better informed about the role they play throughout their educational journey. If student effectively appreciate that their grades and academic progress hinge upon their own active participation in coursework, they will have stronger reasons to take actions and increase their input and engagement. Moreover, students need awareness as to the critical role that readiness plays in preparing them to participate actively and effectively. The sequence of effects among role clarity, ability and motivation, as well as the significant effects of role clarity and ability on participation are reason enough for students to familiarize themselves with their roles across different courses, thereby empowering themselves to identify and acquire the necessary skills that will facilitate and support their active participation. The ultimate benefit of such an approach to one's education is improved academic performance and successful completion of degree requirements.

FIGURE 2:
The Structural Model



Our findings are also germane to key decision makers in institutions of higher education. Colleges and universities should embrace and apply any means (institutional culture, statements of mission, vision and objectives, strategic plans, policies pertaining to faculty and students, etc.) necessary to leverage the positive effects of student readiness and participation on student performance outcomes and subjective evaluations. They can pursue these ends in two directions: (1) inform students about their own agentic role through communication campaigns and emphasize them through instructional design; and (2) create and maintain structural factors and incentives that facilitate and reward attitudes and behaviors conducive to and reflective of student readiness and participation. With increasingly dense competition among institutions of higher education, emphasizing student readiness and engaging them as active participants in their education are no longer options, but strategic imperatives (Duncan, Miller & Jiang, 2012).

Higher education policy makers play an immense, probably the largest, role in shaping the culture of higher education, which informs the expectations, standards, performances, and evaluations of various stakeholders of higher education. Specifically, most, if not all, students have an overall understanding of what they are entitled to as students at institutions of higher education. But is every student aware of his or her responsibilities and obligations? Policy makers have the opportunity to create legal and social incentives at the macro level in order to motivate institutions of higher education as well as individual students to embrace and deploy student readiness and participation as under-appreciated, and sometimes forgotten, resources.

As is the case with all research, our findings are to be considered within limits. Firstly, our data comes from online courses exclusively. Secondly, as research on customer co-creation and participation advances, future researchers might have more effective means of capturing readiness and participation at their disposal. Lastly, future research should consider the effect of goal congruency between educators and students. The results of our study should be contextualized with respect to the differential goals of various stakeholders. For example, how do student readiness and participation unfold when students aim to secure a degree with minimal investment of time and effort, but face educators who base their course design, delivery and assessment on student learning? We hope these findings draw the attention of all related stakeholders to the critical role that students do and should play in higher education.

REFERENCES

Anderson, T. (2003). Modes of interaction in distance education: Recent developments and research questions. *Handbook of distance education*, 129-144.

Arend, B. (2009). Encouraging Critical Thinking in Online Threaded Discussions. *Journal of Educators Online*, *6*(1), n1.

Auh, S., Bell, S. J., McLeod, C. S., & Shih, E. (2007). Co-production and customer loyalty in financial services. *Journal of Retailing*, 83 (3), 359–370.

Bearden, W. O., & Teel, J. E. (1983). Selected determinants of consumer satisfaction and complaint reports. *Journal of marketing Research*, 21-28.

Bento, R., & Schuster, C. (2003). Participation: The online challenge. *Web-based education: Learning from experience*, 156-164.

Bettencourt, L. A., Ostrom, A. L., Brown, S. W., & Roundtree, R. I. (2002). Client co-production in knowledge-intensive business services. *California Management Review*, *44* (4), 100-128.

Bitner, M. J., Faranda, W. T., Hubbert, A. R., & Zeithaml, V. A. (1997). Customer contributions and roles in service delivery. *International journal of service industry management*, *8*(3), 193-205.

Bloemer, J., & De Ruyter, K. (1999). Customer loyalty in high and low involvement service settings: the moderating impact of positive emotions. *Journal of Marketing Management*, *15*(4), 315-330.

Bowers, M. R., Martin, C. L., & Luker, A. (1990). Trading places: employees as customers, customers as employees. *Journal of Services Marketing*, *4*(2), 55-69.

Chapman, D. D., Storberg-Walker, J., & Stone, S. J. (2008). Hitting Reply: a qualitative study to understand student decisions to respond to online discussion postings. *E-Learning and Digital Media*, *5*(1), 29-39.

Chin, W. W., & Gopal, A. (1995). Adoption intention in GSS: relative importance of beliefs. *ACM Sig MIS Database*, *26*(2-3), 42-64.

Choi, I., Land, S. M., & Turgeon, A. J. (2005). Scaffolding peer-questioning strategies to facilitate metacognition during online small group discussion. *Instructional science*, *33* (5-6), 483-511.

Dabholkar, P. A. (1990). How to improve perceived service quality by increasing customer participation. In *Proceedings of the 1990 Academy of Marketing Science (AMS) Annual Conference* (pp. 483-487). Springer International Publishing.

Davies, J., & Graff, M. (2005). Performance in e-learning: online participation and student grades. *British Journal of Educational Technology*, *36*(4), 657-663.

Dellande, S., Gilly, M. C., & Graham, J. L. (2004). Gaining compliance and losing weight: the role of the service provider in health care services. *Journal of Marketing*, *68* (3), 78-91.

Dennen, V. P. (2005). From message posting to learning dialogues: Factors affecting learner participation in asynchronous discussion. *Distance Education*, *26*(1), 127-148.

Dillenbourg, P. (1999). What do you mean by collaborative learning?. *Collaborative-learning: Cognitive and Computational Approaches,* 1-19.

Duffy, T. M., & Kirkley, J. R. (Eds.). (2003). *Learner-centered theory and practice in distance education: Cases from higher education*. Routledge.

Dumont, R. A. (1996). Teaching and learning in cyberspace. *Professional Communication, IEEE Transactions on*, *39*(4), 192-204.

Duncan, I., Miller, A., & Jiang, S. A taxonomy of virtual worlds usage in education. *British Journal of Educational Technology*, 43(6), 949–964.

Easingwood, C. J. (1986). New product development for service companies. *Journal of Product Innovation Management*, *3*(4), 264-275.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of marketing research*, 382-388.

Fung, Y. Y. (2004). Collaborative online learning: Interaction patterns and limiting factors. *Open Learning: The Journal of Open, Distance and e-Learning*, *19*(2), 135-149.

Grönroos, C. (2008). Service logic revisited: Who creates value? And who co-creates?. *European Business Review*, *20*(4), 298-314.

Gros, B. (1997). Instructional Design and the Authoring of Multimedia and Hypermedia Systems: Does a Marriage Make Sense? *Educational Technology*, *37*(1), 48-56.

Guzdial, M., & Turns, J. (2000). Effective discussion through a computer-mediated anchored forum. *The journal of the learning sciences*, *9*(4), 437-469.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, *19*(2), 139-152.

Halbesleben, J. R. B., & Stoutner, O. K. (2013). Developing customers as partial employees: Predictors and outcomes of customer performance in a services context. *Human Resource Development Quarterly*, 24(3), 313-335.

Han, H., & Hyun, S. S. (2015). Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust, and price reasonableness. Tourism Management, 46, 20-29.

Heinonen, K., Strandvik, T., Mickelsson, K. J., Edvardsson, B., Sundström, E., & Andersson, P. (2010). A customer-dominant logic of service. Journal of Service Management, 21 (4), 531-548.

Hersh, R. H., & Merrow, J. (2015). *Declining by degrees: Higher education at risk*. Macmillan.

Hew, K. F., & Cheung, W. S. (2012). *Student Participation in Online Discussions* (pp. 16-25). Springer.

Hiltz, S. R., & Wellman, B. (1997). Asynchronous learning networks as a virtual classroom. *Communications of the ACM*, *40* (9), 44-49.

Homburg, C., Koschate, N., & Hoyer, W. D. (2005). Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay. *Journal of Marketing*, 69(2), 84-96.

Hoyt, J. E. (1999). Remedial education and student attrition. *Community College Review*, *27*(2), 51-72.

Hrastinski, S. (2009). A theory of online learning as online participation. *Computers & Education*, *52*(1), 78-82.

Isakova, K., Nazarbekova, R., & Tiulegenov, M. (2011). Lack of education today – Unemployment tomorrow. *International and Comparative Politics,* 1-21.

Jones, M. A., Mothersbaugh, D. L., & Beatty, S. E. (2000). Switching barriers and repurchase intentions in services. *Journal of retailing*, *76*(2), 259-274.

Kellogg, D. L., Youngdahl, W. E., & Bowen, D. E. (1997). On the relationship between customer participation and satisfaction: two frameworks. International Journal of Service Industry Management, 8(3), 206-219.

Khan, S. (2005). Listservs in the college science classroom: Evaluating participation and" richness" in computer-mediated discourse. *Journal of Technology and Teacher Education*, *13*(2), 325.

Konyu-Fogel, G., & Grossnickle, A. E. (2013). Promotional Determinants of Business School Retention: A Case Study Approach. *Journal of Higher Education Theory and Practice*, *13* (2), 110.

Larsson, R., & Bowen, D. E. (1989). Organization and customer: managing design and coordination of services. *Academy of Management Review*, *14*(2), 213-233.

Lau, L. K. (2003). Institutional factors affecting student retention. *Education*, *124*(1), 126.

Lee, J., & Gibson, C. C. (2003). Developing self-direction in an online course through computer-mediated interaction. *The American journal of distance education*, *17*(3), 173-187.

Lin, J. S. C., & Hsieh, P. L. (2006). The role of technology readiness in customers' perception and adoption of self-service technologies. *International Journal of Service Industry Management*, *17*(5), 497-517.

Lloyd, C. (2014, November 25th). 5 reasons your child should go to college. Retrieved from http://www.greatschools.org/college-prep/3077-cb-extras-1-2-HaveCollegeTalk Now.gs#articleCommentsLinkTo

Lovelock, C. H., & Young, R. F. (1979). Look to consumers to increase productivity. *Harvard Business Review*, *57*(3), 168-178.

Luo, X., & Homburg, C. (2007). Neglected outcomes of customer satisfaction. *Journal of Marketing*, *71*(2), 133-149.

Manolis, C., Meamber, L. A., Winsor, R. D., & Brooks, C. M. (2001). Partial employees and consumers: A postmodern, meta-theoretical perspective for services marketing. *Marketing Theory*, 1(2), 225-243.

Meuter, M. L., Bitner, M. J., Ostrom, A. L., & Brown, S. W. (2005). Choosing among alternative service delivery modes: an investigation of customer trial of self-service technologies. *Journal of Marketing*, *69*(2), 61-83.

Mills, P. K., Chase, R. B., & Margulies, N. (1983), "Motivating the client/employee system as a service production strategy," *Academy of Management Review*, 8(2), 301-310.

Mittal, V., & Frennea, C. (2010). Customer satisfaction: a strategic review and guidelines for managers. *MSI Fast Forward Series, Marketing Science Institute, Cambridge, MA*.

Mittal, V., & Kamakura, W. A. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. *Journal of marketing research*, *38*(1), 131-142.

Moore, M. G. (1989). Editorial: Three types of interaction.

Mustak, M., Jaakkola, E., & Halinen, A. (2013). Customer participation and value creation: a systematic review and research implications. *Managing Service Quality*, *23* (4), 341-359.

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of marketing research*, 460-469.

Oliver, R. L. (2010). Customer satisfaction. *Wiley International Encyclopedia of Marketing*.

Oliver, R. L., & Swan, J. E. (1989). Consumer perceptions of interpersonal equity and satisfaction in transactions: a field survey approach. *The Journal of Marketing*, 21-35.

Palincsar, A. S., & Herrenkohl, L. R. (2002). Designing collaborative learning contexts. *Theory into practice*, *41*(1), 26-32.

Parasuraman, A. (2000). Technology Readiness Index (TRI) a multiple-item scale to measure readiness to embrace new technologies. *Journal of service research*, *2*(4), 307-320.

Petruzzellis, L., D'Uggento, A. M., & Romanazzi, S. (2006). Student satisfaction and quality of service in Italian universities. *Managing Service Quality: An International Journal*, *16*(4), 349-364.

Ploetzner, R., Dillenbourg, P., Preier, M., & Traum, D. (1999). Learning by explaining to oneself and to others. *Collaborative learning: Cognitive and computational approaches*, 103-121.

Prahalad, C. K., & Ramaswamy, V. (2004). Co-creating unique value with customers. *Strategy & Leadership*, *32*(3), 4-9.

Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of research in Marketing*, *26*(4), 332-344.

Roberts-DeGennaro, M., & Clapp, J. (2005). Assessing the virtual classroom of a graduate social policy course. *Journal of Teaching in Social Work*, *25*(1-2), 69-88.

Roschelle, J. (1992). Learning by collaborating: Convergent conceptual change. *The journal of the learning sciences*, *2*(3), 235-276.

Roschelle, J., & Teasley, S. D. (1995). The construction of shared knowledge in collaborative problem solving. In *Computer supported collaborative learning* (pp. 69-97). Springer Berlin Heidelberg.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary educational psychology, 25(1), 54-67.

Seiders, K., Voss, G. B., Grewal, D., & Godfrey, A. L. (2005). Do satisfied customers buy more? Examining moderating influences in a retailing context. *Journal of Marketing*, *69*(4), 26-43.

Seltzer, L. F. (1983). Influencing the" shape" of resistance: An experimental exploration of paradoxical directives and psychological reactance. *Basic and Applied Social Psychology*, *4*(1), 47-71.

Simester, D. I., Hauser, J. R., Wernerfelt, B., & Rust, R. T. (2000). Implementing quality improvement programs designed to enhance customer satisfaction: Quasi-experiments in the United States and Spain. *Journal of Marketing Research*, *37*(1), 102-112.

Siu, N. Y. M., Zhang, T. J. F., & Yau, C. Y. J. (2013). The roles of justice and customer satisfaction in customer retention: A lesson from service recovery. Journal of business ethics, 114(4), 675-686.

Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning: An historical perspective. *Cambridge handbook of the learning sciences*, *2006*.

Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning: An historical perspective. *Cambridge handbook of the learning sciences*, *2006*.

Stevens, L., Verdejo-García, A., Roeyers, H., Goudriaan, A. E., & Vanderplasschen, W. (2015). Delay discounting, treatment motivation and treatment retention among substance-dependent individuals attending an in inpatient detoxification program. *Journal of substance abuse treatment*, *49*, 58-64.

Straub, D. W. (1989). Validating instruments in MIS research. *MIS quarterly*, 147-169.

Szymanski, D. M., & Henard, D. H. (2001). Customer satisfaction: A meta-analysis of the empirical evidence. *Journal of the academy of marketing science*, *29*(1), 16-35.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. University of Chicago Press, 5801 S. Ellis Avenue, Chicago, IL 60637.

Unal, B. (2013, January 17th) Lack of Education Opportunities. Retrieved from https://prezi.com/r-vm4ru0wfxr/lack-of-education-opportunities-presentation/.

Vroom, V. (1964) Work and motivation. New York: Wiley.

Waugh, M., & Su-Searle, J. (2014). Student Persistence and Attrition in an Online MS Program: Implications for Program Design. *International Journal on E-Learning*, *13*(1), 101-121.

Wetzel, J. N., O'Toole, D., & Peterson, S. (1999). Factors affecting student retention probabilities: A case study. *Journal of economics and finance*, *23*(1), 45-55.

Wikström, S. (1996). The customer as co-producer. *European Journal of Marketing*, *30* (4), 6-19.

Yi, Y. (2014). Customer Value Creation Behavior. Florence, KY, USA: Routledge, 2014. ProQuest ebrary. Web. 2 November 2014.

Yi, Y., & Gong, T. (2013). Customer value co-creation behavior: Scale development and validation. *Journal of Business Research*, *66* (9), 1279-1284.

Yu, S. Y., Kim, J., Yoon, H. J., & Park, J. (2015). Consecutive User Satisfaction Surveys for a Cyber-infrastructure.