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# Towards a Conceptual Map of Academic Libraries' Role in Student Retention

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# Towards a Conceptual Map of Academic Libraries' Role in Student Retention

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## A Literature Review



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### ABSTRACT

Academic libraries, like other academic departments, are developing strategies to retain students given the high cost of withdrawing to both students and institutions. The relatively few empirical studies of college libraries and retention efforts cite comfortable library facilities, student employment in the library, and inter-departmental partnerships as effective library strategies to prevent attrition. Much of the professional literature on libraries and retention extrapolates what libraries *could* be doing based on general studies of retention. These empirically-based and theoretical strategies are presented in the form of conceptual map at the end of this review along with a map of institutional stakeholders in a holistic retention strategy.

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### Introduction

Student retention has come to the forefront of college administrators' priorities in recent years as attrition rates have increased. College administrators have begun to see retention as a proxy for institutional effectiveness. Additionally, the Obama administration's new regulations on schools that participate in Title IV federal student loan programs have put more pressure on schools to retain students. Yet only one-third of students who began college had completed a degree within six years (as cited in Watson, 2006). Given the high rates of attrition, administrators have tasked various academic departments to meet institutional goals (including retention) and coordinate their efforts to meet these institutional goals. While the library is thought to have some indirect role in student retention, the empirical evidence tying library services and facilities to retention has been lacking. Many library researchers have theorized the types of library services and facilities that would likely lead to student retention, but empirical studies of student retention can rarely link library services and academic persistence after controlling for a host of variables, such as students' motivation and academic preparedness. In the absence of empirical data, library administrators can extrapolate library-based retention strategies from general

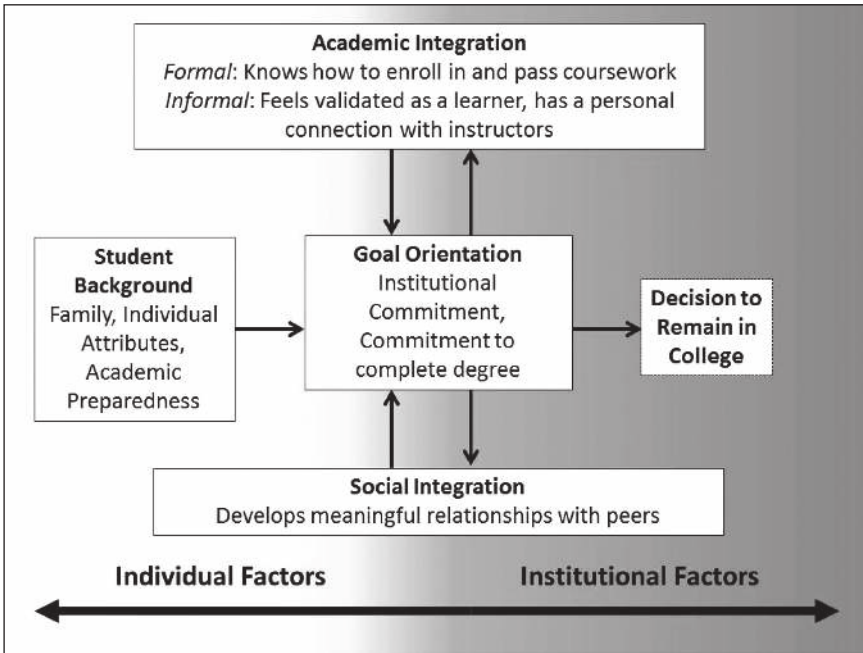
research on student retention. The body of research linking libraries and retention is analyzed using Vincent Tinto's seminal (1993) theoretical model of student engagement cited by multiple researchers who have studied retention. A synthesis of professional literature in academic libraries' efforts to support retention and policy recommendations will be presented, followed by a conceptual map that visualizes the corpus of library literature on retention.

## **What We Know About Student Retention**

Research on student retention is a particularly poignant area of research given increased federal scrutiny of colleges that participate in federal student loan programs. A heavily cited and empirically validated model for understanding retention has been the work of Vincent Tinto. He published his model of student engagement in his 1993 book, *Leaving College: Rethinking the Causes and Cures of Student Attrition*. From a synthesis of his own research and existing professional literature, he surmised that student retention hinges on integration, that is, the perceived and real connections that a student has to the academic and social aspects of college (see Figure 1). This model applies the theories of French sociologist Emile Durkheim's research on social integration to the formal and informal means of integration in college life. This model focuses on the mutually reinforcing processes of integration; whether or not a student feels validated socially and academically and how this affects his/her desire to complete a degree and remain at a particular institution. Tinto (1993) distinguishes between formal and informal academic integration. Formal academic integration involves understanding the processes of enrolling in classes and meeting the requirements for graduation. Informal academic integration involves the affective components of integration, including whether or not students feel connected to instructors, validated as competent learners, and comfortable using information systems and resources to perform class-related activities (i.e. feeling confident in using Blackboard or borrowing library materials). Social integration is defined as connecting to one's peers in student activities, interpersonal relationships, and in collaborative study projects. As one might assume, students who are more academically and socially integrated by Tinto's criteria are more likely to complete their degree.

Tinto's (1993) model of integration has been tested and confirmed in a number of studies. Exit surveys from residential colleges reveal that 16 out of 19 empirical studies on social integration affirmed the need for students to feel a sense of belonging. All eight empirical studies based on this model affirmed the need for students to develop meaningful relationships with instructors and to feel valued for their intellectual contributions (Seidman, 2005). Researchers in academic libraries have repeatedly used this model to explain how to identify the triggers of dropping out and how to strategically combat these triggers.

**Figure 1.** Visualization of Tinto's student retention model (1993)



Retention research produced after Tinto's study applied his model of academic and social integration to traditional risk factors for dropping out, such as being a first-generation college student, a minority, or coming from a low-income family. Minorities, low-income students, first-generation students, and academically unprepared students have higher rates of departure (Haddow & Joseph, 2010; Seidman 2005; Wilder, 2000). In addition, students with unclear goals and those who are academically unprepared were far more likely to drop out (Soria, Fransen, & Nackerud, 2013; Tweedell, 2000). Consequently, a discussion on student retention, whether in the scope of library services or institution-wide strategies, must consider the demographic traits of students who are more prone to drop out of school.

## Academic Libraries' Impact on Student Retention

### Funding of academic libraries and student retention

Given the recent budget crises in higher education institutions, college administrators have tied the funding of departments to their contributions to institutional goals, such as reducing student attrition. There is a paucity of literature that documents how library funding stems attrition. One of the few comprehensive empirical studies involved data from over 500 libraries using information from Academic Library Trends and Statistics: 2003 and the ARL Statistics: 2002–03 (Mezick, 2007).

This study compared library expenditures for each institution against attrition data from the yearly Integrated Postsecondary Education Data System (IPEDS) data on student retention and clustered institutions by their Carnegie classification (baccalaureate, masters, or doctoral-granting institutions). Mezick (2007) found that in baccalaureate-granting institutions, library funding accounted for 26% of the variance in retention, while librarian-to-student ratio was weakly correlated on all

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*As one college retention expert put it, “Many students don’t develop a [personal] connection with their institution. And when they don’t, they leave”*

(as cited in Oakleaf, 2010, p. 33).

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but doctoral levels of study. Steven Bell cited a study in his 2007 report “Keeping Them Enrolled: How Academic Libraries Contribute to Student Retention” that found that a 10% increase per student in library funding is correlated to a 1.77% increase in graduation rates. Even when presented with data correlating library funding and student satisfaction with library service, critics suggest that this relationship is merely causal logic. Institutions with well-funded libraries are also more likely to spend more on other academic departments and this, in turn boosts student morale. It is thus impossible to isolate the library’s distinctive impact on student retention. Nonetheless, increasing spending on libraries, in conjunction with other academic departments, could be a rising tide for student morale and equip library staff to offer more proactive outreach to struggling students.

### **Affective outcomes with library services and retention**

The body of research linking students’ perceptions of their engagement with academic institutions, confidence in one’s own academic potential, and retention can be applied to students’ perceptions of library. It is widely understood that students’ perceptions of how well their institution supports the learning process can predict a student’s likelihood of persisting in college. In a recent study of Australian undergraduates, 39% of students indicated their desire to drop out due to a perceived lack of institutional support, while only 21% of those who felt supported by their institution indicated the same desire (Hagel, Horn, Owen, & Currie, 2012). Among the disproportionate number of dropouts among distance and older students in similar studies of Australian undergraduates, departing students cited the unfamiliar process of accessing online learning materials and lack of human contact as reasons for their decision to not continue their studies (as cited in Hagel, et. Al., 2012). Several other studies have confirmed a widespread confusion about the role of

library staff or library resources (as cited in Hardy, 2007; Haddo, 2010; Weston, 2008; Wilder, 1990), exacerbating the likelihood of informal academic disengagement. Students are largely unaware of what librarians actually do, particularly in the digital age, and many fail to realize the library's potential in formal and informal academic engagement. This could very easily fit in to Tinto's (1993) model of student retention; that students with lower levels of informal academic engagement are less likely to be retained. Miller & Murillo (2011) performed ethnographic studies of student behavior in three academic libraries in Illinois. It should be noted that in previous studies cited by Miller & Murrillo (2011) and in their own ethnographic study of student-librarian interactions at three Illinois academic libraries, most students do not realize that librarians have a function other than locating books in the stacks. Many of the students interviewed in this study, even upper level students, had no idea what "reference" and "circulation" desk signs designated, much less that librarians could help students to conceptualize their research and use online resources. Library facilities and resources, on the other hand, factor more strongly in students' perceptions of their academic success. A 2006 library services survey, containing the responses of nearly 1,300 undergraduates at the California State University of Bakersfield, revealed that students across lines of demographics and academic achievement rarely perceived reference services or credit-bearing courses as components of their academic success. Instead, they were more likely to cite computer workstations and electronic resources as components (Grallo, Chambers, & Baker, 2012). While students may have a neutral or mildly positive perception of librarians, few studies have found that students perceive the library staff as instrumental in their academic success, much less deciding to remain at an institution. This is not to say that library staff could not help curb student retention. Student employment in the library is one well-documented way in which librarian-student interaction can boost academic integration, a key component of Tinto's (1993) retention model.

### **Student employment in the library**

Student employment in general is positively associated with retention, while off-campus employment increases the likelihood that students will drop out (Lau, 2003). Exposure to a broad array of learning resources can assist students in the process of informal academic integration (Weston, 2008). One of the earliest published surveys on student library employment underscored the benefit of "demystifying the library" for student workers; library workers understand how libraries are organized and are more likely to use a breadth of library resources than other students (Wilder, 1990). Subsequent qualitative studies of students' perceptions of library work echo this language. Student workers at San Diego State University revealed through personal interviews that they were (1) able to make connections with professors outside of the classroom; (2) use a broader range of learning resources to do higher-quality class assignments; and (3) assist their peers with using library resources, thereby

enriching their peers' academic integration (Weston, 2008). This type of integration has been empirically proven to boost students' persistence in a degree program. Loyola University instituted a peer information counseling (PIC) program in the mid-1990's to train student assistants to answer in-depth reference questions. A longitudinal study of library student workers revealed that their retention rate was far higher than most incoming freshmen at Loyola. The retention rate was even higher for minority participants of the PIC program than for non-minority students (Rushing & Poole, 2002). In the few studies of student library workers, the benefits of library employment in retention are maximized when students are trained for specialized tasks that can be used in future employment and instill self-confidence, rather than rote tasks that are perceived simply as 'busy work' (Rushing and Poole, 2002; Weston, 2008; Wilder, 1990).

### **Library use and student retention**

The research on whether the use of library resources affects the likelihood of persisting in one's education is mixed. Several studies have been undertaken since the late 1960's and the result is either a weak correlation between use of library resources and retention or none whatsoever. Furthermore, some would argue that positive correlation between library use and student retention is merely causal logic; highly motivated students are naturally more likely to use library resources *and* are more likely complete their degree. Library usage cannot reliably predict whether

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*“Student engagement is both a means and an end.  
That is, it serves as a proxy for collegiate quality by  
reflecting the degree to which students take advantage  
of their institutions' learning opportunities”*

(“The Role of the College Library”, 2007).

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or not a student will remain at an institution. What can be surmised from these studies is that library use can be used to forecast, in part, students' persistence in their institutions. For undergraduates at University of Minnesota, Twin Cities, Soria (2007) discovered that the odds ratio of freshmen returning for the second semester was 1.03 for every database login, suggesting that database usage is correlated to retention, albeit weakly. In a survey of over 4,000 incoming students at Curtin University (Western Australia), nearly two-thirds of the student population had not checked out any library materials, while a substantial majority had used the databases or computer workstations. There was no significant difference between retained students and drop-outs in terms of circulation of library materials (Haddow & Joseph,

2010). As a result, it is safe to assume that circulation of library resources has little impact on students' persistence in college. Table 1, reprinted from the monograph *Library Assessment in Higher Education* (Matthews, 2007) illustrates a number of studies attempting to correlate library use and student academic performance between 1968 and 2001. The correlation between student academic performance and the circulation of library resources is weak or non-existent.

**Table 1.** Literature Review of Studies Correlating Library Circulation and Student Academic Performance

<b>Supportive</b>	<b>No Support</b>
Astin (1968) Weak correlation between number of books/student (FTE) and GRE Scores [669]	Nichols (1964) Library size and GRE scores showed no correlation
Rock et al. (1970) Weak support for number of library books/student (FTE) and GRE scores	Troutt (1979) No link between library resources and student achievement
De Jager (1997) Weak support for use of library materials and better grades [240]	
Whitmire (2001) Students who studied more used library resources more frequently [643]	Wells (1995) No link between time spent in the library and academic success [251]
Donovan (1996) More active book borrowers received higher grades	Lane (1996) No correlation between borrowing materials and academic success
Kramer and Kramer (1968) Library users more likely to stay in school [742]	Kramer and Kramer (1968) Most freshmen borrowed no materials
Barkley (1965) Link between items borrowed and student's GPA	Hiscock (1986) No support for use of the library and academic performance [192]
	Mays (1986) No link between the use of the collection and academic achievement
	Self (1987) No support for use of reserve materials and academic success [8,454]
	Schulz (2001) Undergraduates do not request materials from other libraries in proportion to their relative numbers [300]

Note. Numbers in brackets indicate sample size (N).

Reprinted with permission from *Library Assessment in Higher Education* (p. 65), by J. Matthews, 2007, Westport, CT: Libraries Unlimited.

## What Academic Libraries Can Do to Boost Student Retention

Given the body of research on student retention in general, and the library's role in retaining students in particular, academic libraries have partnered with other departments to boost student retention. These strategies can be grouped into two major categories: 1) outreach to other departments through liaison programs and 2) integration of related services in the library facilities. Those available to all students



and those targeting demographically at-risk groups can categorize outreach strategies. The second category of retention strategies have often brought other departments in the library through housing them in library facilities and embedding librarians in key external departments, such as academic support centers, minority/diversity-related cultural centers, and student affairs offices. Librarians have developed forward-thinking ways to make the learning and acculturation process seamless and in the process, have contributed to student retention.

### **Integration of other departments and services in the academic library**

In recent years, academic libraries have trended towards an information commons model. This paradigm shift in thinking about libraries has been achieved through the housing of departmental liaisons and entire departments within the library's facilities by consolidating print holdings. A study of questions posed to library staff at California State University, Monterey Bay revealed that nearly half of students' questions were not reference questions, but rather directional and computing questions (Grallo, et. al., 2012). Students were far more likely to ask about general university policies and technology than they were to ask about research. This is particularly true for institutions serving at-risk student groups (which will be discussed in the next section). The use of technology to deliver information may unintentionally create unequal student outcomes. Learning technologies, like electronic databases and learning management systems, unintentionally alienate less-than-savvy students. Frustrated students are more likely to end their studies as a result (Hagel, Horn, Owen, & Currie, 2012; Haddow, 2013). Housing additional departments in the library has increased foot traffic in the library, such as writing and tutoring centers. Several libraries have seen an increase in the use of library resources, a 'cross-pollination' of staff service models with writing center staff when libraries and writing centers integrate their services, and increased coordination of retention efforts by sheer visibility and interactions between writing center staff and the library (Hardesty, 2007; Mahaffy, 2008; Pagowsky & Hammond, 2012). Librarians have brought other departments in, such as IT and writing centers, and have reached 'out' through several means. One well-documented type of outreach is the 'embedded librarianship' model. Other models include partnering with student affairs departments to identify academically vulnerable students and offer them support as needed. The Queensland University of Technology (Australia) used Student Success Assistants to contact struggling students and refer them directly to a librarian for personalized assistance (Nelson, Quinn, Marrington, & Clarke, 2012). The University of Arizona developed a program that included librarians reaching out to struggling students. Instructors would mark absent or low-performing students in the college's early alert system and the learning support staff would answer basic reference questions. In addition, library staff offered workshops to students on academic probation for plagiarism violations on how to avoid plagiarism by citing their sources correctly (Pagowsky & Hammond, 2012).

## Library outreach to demographic groups

In addition to library support for underperforming students, several institutions have developed programs for demographic groups that are statistically more likely to drop out of college. These groups include racial/ethnic minorities, first-generation college students, freshmen commuters, and low-income students (Hagel, et. al, 2012; Hardesty, 2007; Lau 2003; Seidman, 2005). Racial and ethnic minorities are less likely to report using the library facilities and resources, which some researchers have attributed to the lack of minority librarians and the use of informal networks for vital campus information (Attinasi, 1989; Long, 2011). The first documented library outreach programs to racial and ethnic programs were the peer information counseling programs mentioned in a previous section. While these programs were successful in retaining student workers who were trained in reference assistance, they were underutilized by minority students themselves (Love, 2009). Instead of developing separate initiatives to boost student retention among racial and ethnic minorities, Love (2009) documents several university libraries that have partnered with campus-wide efforts to recruit and retain minority students. The University of Illinois, for example, has included instructional workshops in three scholarship programs for minority and low-income students (Love, 2009).

Outreach to other vulnerable groups often takes the form of teaching or co-teaching freshmen success seminars. These courses have become ubiquitous as colleges seek to boost retention of first-year students as members of this group is the most likely to drop out of college (Lau, 2003). The Association of College and Research Libraries released a monograph in 2007 entitled, *The Role of the Library in the First College Year*, that outlined strategies at different institutions to engage first-year students. Among the numerous strategies for engaging new students, Eastern Kentucky University's (EKU) strategy in particular resonates with retention-minded librarians in that it targeted multiple factors in a student's decision to withdraw. EKU serves many low-income, first-generation college students and has a comprehensive mentoring program to help first generation students to succeed. The librarians, in partnership with first year seminar instructors, developed a library instruction session which incorporated career exploration. This session was successful in reducing library anxiety and increasing students' confidence in their studies by involving a topic that was pertinent to low income students (as cited in Hardesty, 2007). Many of these students who found college to be a large financial risk were much more at ease after considering a number of career paths. This type of instruction was particularly successful because (1) it targeted a specific at-risk group (first-generation college students), (2) it addressed a major concern for this group (cost of college), and (3) it focused on the affective aspects of the campus acculturation process.

## **Extrapolating Library Retention Strategies from Existing Literature**

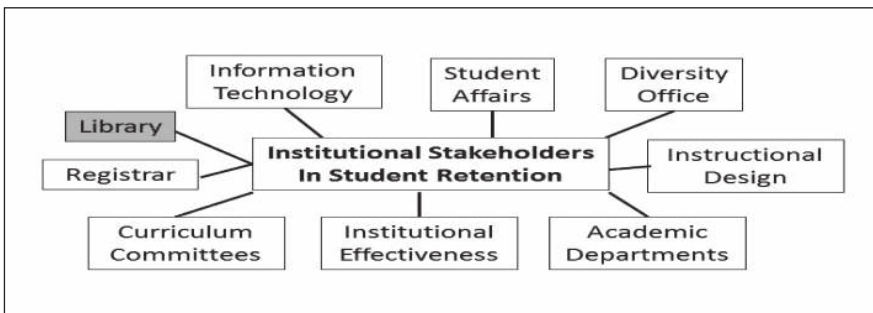
Since there is a lack of empirical studies linking the library to student retention, several researchers employed research on student retention in general to speculate how library programs and services could theoretically assist an institution in retaining its incoming students through graduation. Much of this literature focuses on using library facilities to host multiple departments and conduct one-on-one peer counseling (Grallo, et. al, 2012; Hardesty, 2007; Pagowsky & Hammond, 2012). Using Tinto's model, several college have attempted to create study cohorts and learning communities with success in curbing retention (Lau, 2003; Tinto, 1997; Twedell, 2000). Even large schools serving non-traditional students, such as Seattle Community College, were able to retain more students by creating interdisciplinary learning groups with required group study sessions (Tinto, 1997). Given the growing number of non-traditional students enrolling in colleges, library facilities could very well serve as a place of interaction and thus, contribute to the social and academic integration of residential students (Seidman, 2005). Libraries could host peer counseling programs that have been empirically proven to boost student integration and, ultimately, retention. Given the central campus location and extended hours of most campus libraries, library commentators have suggested that the library could be a third space that fosters academic and social integration (Price & Fleming-May, 2011). Bell (2008) suggests incentivizing student retention by offering upperclassmen preferred access to study carrels and private study rooms. A recurring theme in speculative literature on academic libraries and student retention is that the library's efforts must be part of a systematic, campus-wide approach at retention. Pagowksy and Hammond (2012) summarize the sentiment of academic library researchers that library retention efforts must involve "this type of systems thinking, where the library is highly connected to the rest of the institution is integral in demonstrating the value of the library and making efforts to support campus-wide retention resonate at a larger scale" (p. 584). The future of library retention efforts lay not so much in the isolated efforts of librarians, but in librarians working with other departments to retain students through graduation.

## **Conclusion**

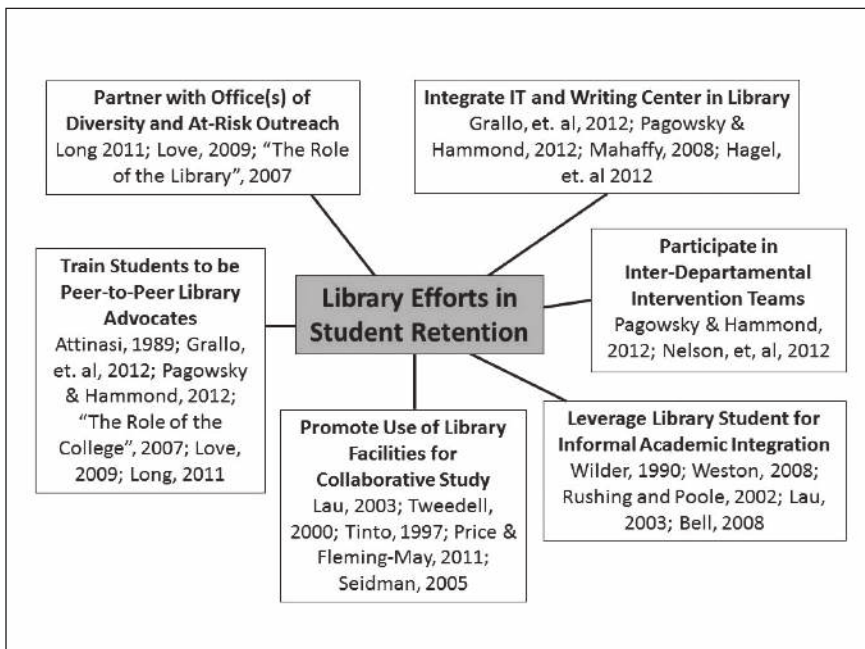
Student retention is an emerging institutional goal for academic libraries and will continue to be as colleges and universities seek to curb student attrition rates. Library administrators, as well as administrators in other departments, are beginning to realize that curbing student retention is a holistic project that should involve many institutional stakeholders. The library's contribution to retention efforts should not necessarily seek to boost student use of library resources or traditional proxies of library effectiveness, but should redefine library 'use' by improving student research skills, channeling collaborative study groups into the library (and thus facilitating the informal integration process), answering a range of inquiries about technology issues

and college policies, and making certain that students feel comfortable using library resources and information systems. Library administrators would be wise to study the triggers that often cause students to drop out (such as inability to use online course tools, alienation from peers and instructors, and the inability to navigate through college policies) and to prepare staff and design facilities accordingly. Rather than developing an isolated library strategy to assist vulnerable students, libraries could partner with existing campus programs and departments that serve these students. The future of library efforts in student retention will lie as much in reaching out to other departments as allowing other departments in the library. †

**Figure 2.** *Conceptual Map of Institutional Stakeholders in Student Retention Efforts*



**Figure 3.** *Conceptual Map of Library Efforts in Student Retention*



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