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Retention strategies for online students: A systematic literature review

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Abstract

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Keywords

student retention, online higher education, student attrition, student success

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Retention Strategies for Online Students: A Systematic Literature Review

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The purpose of this paper is to examine online retention research in higher education over a 5-year span (January 2015–March 2019) to further advance research in higher education retention. Through an academic database search, 18 articles were collected from EBSCOhost, Google Scholar, and Research Gate using combinations of the keywords *online*, *retention strategies*, and *higher education*. All articles were analyzed for proposed retention strategies. Retention is a global topic. As such, this study demonstrates the importance of retention and clarifies issues or challenges students encounter, which may cause lower retention rates. The data reviewed suggest the most common retention issues or strategies involved student factors/motivation as well as faculty and student interactions. Common retention strategies most often included enhancing faculty training and/or support and adding student services positions and/or support.

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Introduction

Colleges and universities work extensively to recruit students due to the increased level of competition in the market (Maringe, 2006). Once students are enrolled, however, these same institutions may lack an equivalent level of focus on retaining students. While significant enrollment increases are vital for an institution's financial stability, it is just as important to retain students through graduation. The importance of retention strategies is heightened when online courses are considered. Technological advancements have expanded online course offerings, thereby making it easier for students who cannot attend traditional seated courses to participate in a college or university experience. Online education courses are now one of the world's top industries (Bawa, 2016).

Retention issues impact both 2-year community colleges (associate degree level) and 4-year universities (bachelor's degree level) alike. Aulck et al. (2016) state that nearly 30% of first-year students at 4-year universities do not return to their second year. Consequently, these students spend \$9 billion on their education without completing a degree. Retention concerns increase when online courses are considered. Historically, online courses have a 10% to 20% higher failed retention rate than traditional courses (Bawa, 2016). Undoubtedly, retention rates are a concern for

both those in traditional courses as well as those taking online courses. The focus of this study, however, is online student retention.

Online retention rates are an issue for colleges and universities across the globe. Although this is an important topic, there is not a substantial amount of accumulated research in the area. With online courses and programs gaining in popularity, the need for additional research investigating online student retention is vital (James et al., 2016). This research study will add to the online student retention body of work by examining retention strategies and offering potential pathways to advance future research. A lack of consensus has challenged the identification of common, effective strategies that help increase student retention strategies in the academic online setting (Bawa, 2016). This, in turn, has delayed the ability to examine anticipated retention results.

Consequently, the main purposes of this research project are to:

- identify academic retention strategies at 2-year and 4-year institutions; and
- identify the most up-to-date literature on retention strategies in academia.

Literature Review

Retention Overview

Colleges and universities often have favorable success recruiting students to their school (Smith, 2016), but retention can be a more difficult subject to tackle and has become a challenging issue for many institutions (Rizkallah & Seitz, 2017). Student success and degree completion are important for the long-term success students, as well as the long-term success institutions (Shaw et al., 2016).

With a more diverse population attending school, online courses have grown in popularity making online education one of the top industries in the world (Bawa, 2016). Online courses offer great advantages for students, including flexibility. In the past decade, there has been a 100% increase in student enrollment in online courses (Muljana & Luo, 2019). Student retention rates, however, have not realized the same level of increase. Students in online courses have a 10% to 20% lower retention rate than those who take traditional seated classes with 40% to 80% of students dropping their online courses (Bawa, 2016).

Research suggests retention rates differ depending on the type of institution. James et al. (2016) reported students enrolled in community colleges realized a 30–35% retention rate in fully online courses compared to a 50–60% retention rate of their counterparts enrolled in blended or seated courses. Retention rates improved at the 4-year institution level (bachelor's degree level). Reported retention rates at 4-year institutions for fully online students were 60–65% compared to a 75–80% retention rate of students in blended or seated courses (James et al., 2016).

Student Success Overview

In the past, academic success was solely the student's responsibility. Now, academic success is considered a shared responsibility as more diverse student populations enter into post-secondary studies. These diverse populations can include those of differing gender, ethnicity, income, age, family history of attending college, disabilities, and more. In an attempt to foster academic success,

institutions often provide resources, services, and programs that address students' academic and personal needs (Crosling, 2017).

A large body of literature proposes that recruiting more competent and motivated students is the main condition to increase retention (Chang et al., 2016). Others suggest the overall institutional commitment and student support are key factors influencing retention. Even more interesting is the body of literature that indicates state government has a significant influence on retention through government policies (Kumashiro, 2015). Such governmental strategies include granting academic institutions autonomy in regard to retention as well as offering incentive funding to motivate institutions to implement innovative programs geared towards increasing student success and retention (Li et al., 2018).

Student Profile

Research completed by The Learning House and Aslanian Market Research shows nearly half of online undergraduates work full-time while going to school (Magda & Aslanian, 2018). Just under 75% of online students surveyed indicated their main motivation for furthering their education was to advance their careers in some form. This included preparing to transition to a completely new career, updating skills for their current job, or increasing their wages and salary by seeking a promotion (Magda & Aslanian, 2018).

Research also suggests there are distinct differences between traditional student expectations and online student expectations. Traditional students tend to expect more active forms of classroom delivery, which enables students to learn by directly interacting with instructors and other students. These face-to-face collaborations are key to building student competencies (Angelino et al., 2007). Online learners, on the other hand, tend to seek virtual services and resources that are convenient and accessible on-demand (Wladis et al., 2015).

Factors Influencing Student Retention

Understanding the factors leading to low retention rates is important (Tight, 2020). Knowing these factors can help improve both student and university success. From a financial perspective, it is more cost-effective to see students through to degree completion than it is to replace those students (Shaw et al., 2016).

The factors influencing student retention may vary depending on demographic differences. Some factors of influence are outside the institution's control. These factors can include changes in financial support, career path selection, or personal issues (Rizkallah & Seitz, 2017). There are, however, several factors an institution can assist with that may positively influence student retention. Such factors involve attending to life factors (places to study, resources available, etc.), supporting diverse learning styles, developing student personal attributes (seeking help when needed, using time management skills, etc.), and developing technological competencies (Shaw et al., 2016). Combined, these factors play an important role in an institution's student retention rate.

Research Design and Methods

Research Process

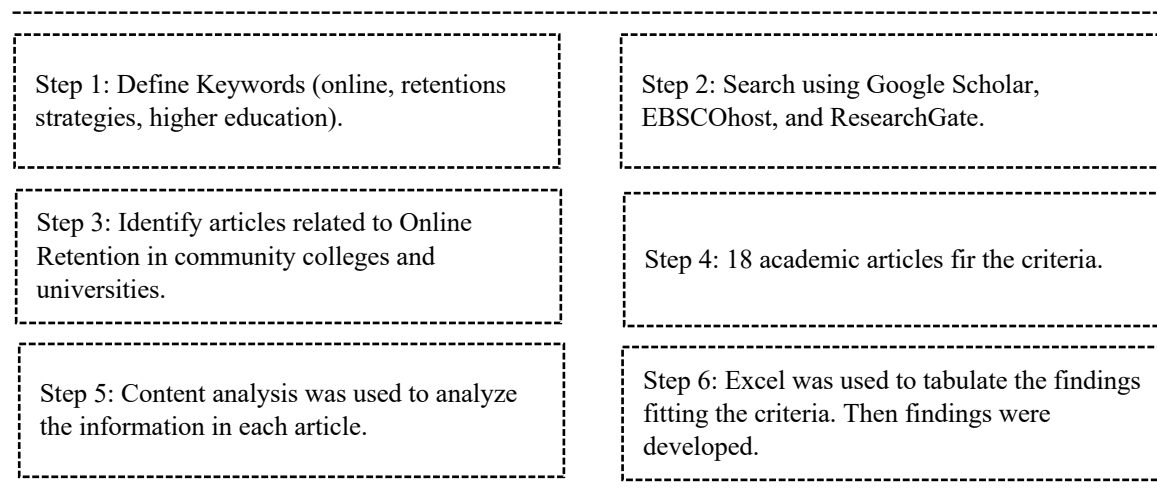
For this study, a six-step process was employed for the systematic review of the literature. This process is depicted in Figure 1. To begin the review process, key terms to use in article database searches were identified. Three keywords were selected including *online*, *retention strategies*, and *higher education*. Next, the three keywords were entered into three article databases—Google Scholar, ResearchGate, and EBSCOhost—to locate related articles. Articles about online retention in community colleges and universities were reviewed for themes of retention issues, challenges, and strategies (Bawa, 2016).

Then, articles were filtered and refined based on their relevance, usability, and applicability to the subject matter, as well as availability. During the keywords search, only peer-reviewed journal articles and peer-reviewed published full-text were included in the search. Articles that did not directly relate to retention strategies in the online environment were eliminated. Full-length published studies, editor notes, critics, industry white papers, prefaces, research notes, internet publications, books, and book chapters were not considered for analysis. After considering the criteria, duplicate studies resulting from each database search (i.e., Google Scholar, ResearchGate, and EBSCOhost) were screened and removed as needed.

From this process, 18 articles meeting the established criteria were located and considered in the review. Next, a content analysis was completed on each article. Finally, Excel was used to tabulate the findings in the articles analyzed.

Of the 18 articles selected and reviewed, 17 different journals and one conference paper were represented in the data set. Six of the journals were specific to online learning or distance learning. Not all articles contained both retention issues and retention strategies. Only eight of the articles had retention issues and challenges listed, and 15 of the articles had retention strategies. Out of the 18 articles, five of the articles offered both retention issues and challenges, as well as strategies.

Figure 1. The Review Process



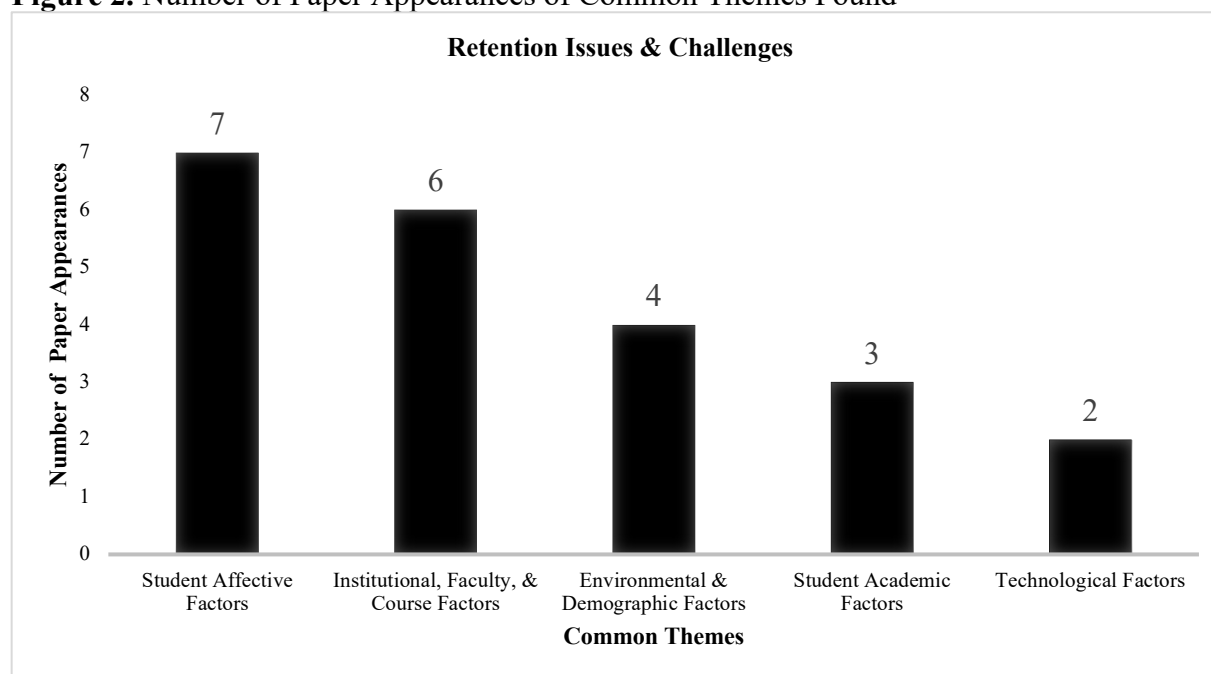
Results and Discussions

Eighteen articles were reviewed in this research. Sixteen of them were specific to online retention and two related to the general retention topic. The literature was not limited to the United States, nor was it limited to specific departments or areas within an institution.

Retention Issues and Challenges

In the 18 articles reviewed, there were 19 common retention issues and challenges found. Those issues and challenges were grouped into five common themes displayed in Figure 2. The five common themes include: (a) student affective factors; (b) institutional, faculty, and course factors; (c) environmental and demographic factors; (d) student academic factors; and (e) technological factors.

Figure 2. Number of Paper Appearances of Common Themes Found



Student Affective Factors

Student affective factors were the most commonly mentioned retention issue as it was mentioned in 7 out of the 18 articles. These factors are specific to a student's attitude, values, beliefs, learning, and ability to perform needed tasks to succeed (Jeffreys, 2015). Researchers have mentioned that motivation is an essential element of online classes (Boton & Gregory, 2015). Motivation is a critical issue that can cause low retention particularly since online classes tend to be self-directed (Bawa, 2016). Other student affective factors involve how a student perceives the online course, psychological factors such as satisfaction and stress, and the misconception of the cognitive load online courses require (Bawa, 2016).

Institutional, Faculty, and Course Factors

The second most common retention issue related to the relationship between the institution, faculty, and students. Six of the 18 articles mentioned this relationship. It can be challenging for faculty members to develop *presence* in an online course when face-to-face meetings are not required. Faculty expressed concerns about the ability to interact with students in their online classes (Wingo et al., 2017). Another factor that appeared to influence retention was the course structure itself. Students' perceptions of course usability correlated to students' satisfaction and learning (Gray & DiLoreto, 2016). From an institutional standpoint, an institution's beliefs and values, lack of transferability, lack of student support services, and lack of faculty training resources all impact retention rates (Bawa, 2016).

Environmental and Demographic Factors

The third most common retention concern related to environmental and demographic issues. These factors were mentioned in 4 of the 18 articles and typically correlated to student issues outside of school. Jeffreys (2015) noted environmental concerns often include "financial status, family financial support, family emotional support, family responsibilities, childcare arrangements, family crisis, employment hours, employment responsibilities, encouragement by outside friends, living arrangements, and transportation" (p. 428). Other environmental factors Jeffreys mentioned related to political events, economic issues, and job uncertainties. Additionally, demographic factors such as students' age, gender, ethnicity, and race (Fraser et al., 2018) were mentioned in the discussion of online retention concerns.

Academic factors

The fourth most common retention concern centered around academic factors related to students. Academic factors were discussed in 3 of the 18 articles and involved items such as a student's GPA, study skills, attendance, and class schedule. These factors tend to be significantly influenced by the needs of individual students and the philosophical leanings of the institution (Fraser et al., 2018).

Technological Factors

The final grouping of retention issues pertained to technological factors. These concerns were noted in 2 of the 18 articles. Students may encounter obstacles and withdraw from online courses if they are not *technically savvy* or do not possess the technical elements necessary to succeed. Lower retention rates can occur when ineffective course design, based on incorrect assumptions of students' abilities, is utilized (Bawa, 2016). Online courses also face the issue of ever-changing technological advances. Staying abreast of such advances or changes requires a time commitment to do so (Muljo et al., 2017). A detailed breakdown of the articles relating to each factor category is presented in Table 1.

Retention Solutions

Out of the 18 articles reviewed, there were 25 common retention strategies found. Those strategies were grouped into five common themes as depicted in Figure 3. The identified themes include (a)

course development, (b) student success support, (c) faculty involvement, (d) social engagement, and (e) emotional engagement.

Table 1. Retention Issue Article Appearance

Issue	Article*																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Student Affective Factors	x	x			x	x	x	x										x	7
Institutional, Faculty, and Course Factors	x						x	x	x			x						x	6
Student Academic Factors					x	x	x	x											4
Environmental and Demographic Factors	x	x			x				x										4
Technological Factors	x											x							2

Note. *

1. Bawa, 2016	7. Gray & DiLoreto, 2016	13. Khalid & Quick, 2016
2. Boton & Gregory., 2015	8. Jeffreys, 2015	14. Redmond et al., 2018
3. Crosling, 2017	9. McLeod, 2019	15. Richardson et al., 2016
4. De Freitas et al., 2015	10. Milman et al., 2015	16. Shaw et al., 2016
5. Fraser et al., 2018	11. Moisey & Jalovcic, 2015	17. Travers, 2016
6. Gaytan, 2015	12. Muljo et al., 2017	18. Wingo et al., 2017

Course Development

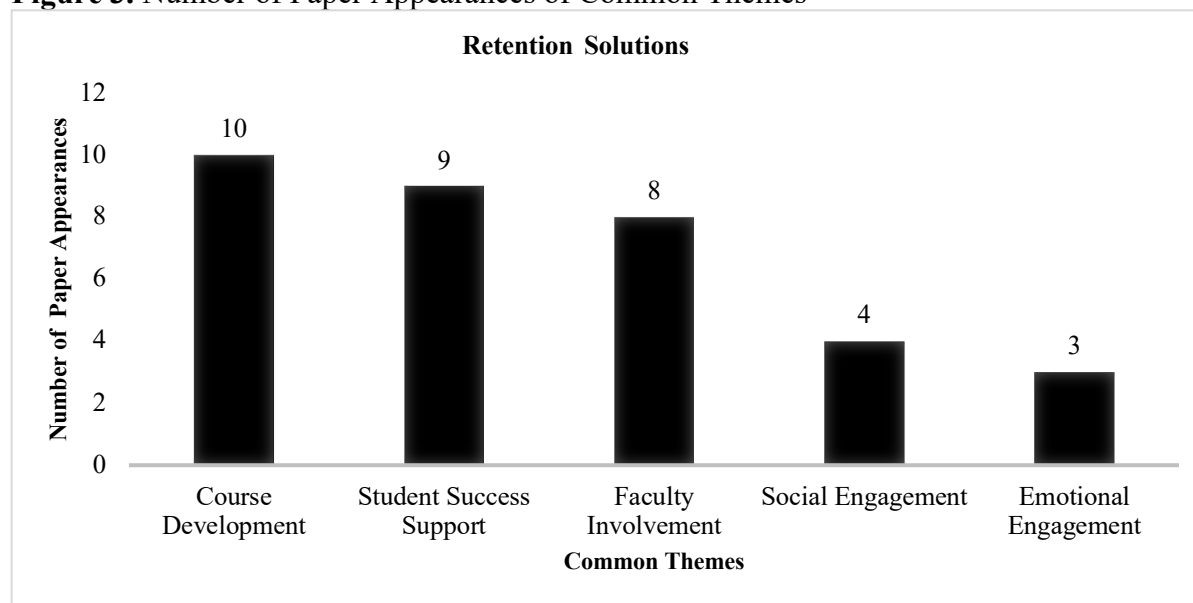
Attention to course development appeared to be a critical retention strategy as it was identified in 10 out of the 18 articles reviewed. One of the most common retention strategies discussed pertained to providing timely assessment and feedback to students. When a faculty member gives meaningful feedback, it can help students improve in areas of deficiency. Another retention strategy was to create more collaboration opportunities within the class. Overtime, peer-led methods and peer interaction can increase retention rates (De Freitas et al., 2015).

Overtime, peer-led methods and peer interaction can increase retention rates (De Freitas et al., 2015). Incorporating cognitive engagement elements when designing courses was also a key retention strategy. Such cognitive engagement elements involve “thinking critically, activating metacognition, integrating ideas, justifying decisions, developing deep discipline understandings, and distributing expertise” (Redmond et al., 2018, p. 192).

Student Success Support

Student success support also proved to be a common retention strategy. Strategies about student success support were noted in 9 of the 18 articles reviewed. If institutions want online students to be successful, student success resources must be available to them. These resources include outreach services, life and career planning, financing/financial aid, student support systems, technology support, strategic partnerships, and transition support (Milman et al., 2015).

Another key student success factor is the implementation of mandatory orientation programs. According to Bawa (2016), one of the largest “deterrents to online retention is the overestimation of student capabilities with respect to the demands of time, commitment, and technological skills required in online learning” (p. 7). To address these concerns, Bawa recommends making orientation programs mandatory so faculty and students understand their abilities and become more prepared. In a study completed by McLeod (2019), instructors were eager to be able to take part in a student success course and wanted to continue to share it with students. Students who are not adequately prepared for their online courses had a higher rate of not completing them (Travers, 2016).

Figure 3. Number of Paper Appearances of Common Themes

Faculty Involvement

Faculty involvement in the online learning process was a prevalent retention strategy found in the data. This particular strategy was found in 8 of the 18 articles examined. Research suggests that teaching presence is a critical factor related to course satisfaction (Khalid & Quick, 2016). In a study completed by Richardson et al., (2016), most of the instructors interviewed agreed their presence was one of the most, if not the most, critical aspects of online learning including faculty and student interactions (Gaytan, 2015). However, it is also important that faculty develop their mentoring skills so that they can effectively connect teaching with student success (Shaw et al., 2016).

Social Engagement

Opportunities for social engagement were also noted as an effective retention strategy. This particular strategy was suggested in 4 of the 18 articles considered. Social engagement can be difficult for online students, but it can be important for their success. To encourage social engagement, faculty may need to incorporate such opportunities in their course. Typically, the make-up of an online class is diverse with people from all backgrounds and viewpoints (Warren, 2018). Social engagement can occur through well-designed collaborative activities, blogs, chat rooms, wikis, and forums, video and mini-lectures, and case studies (Boton & Gregory, 2015).

Emotional Engagement

Emotional engagement appeared to be another tactic used to support online student retention. This strategy was observed in 3 of the 18 articles reviewed. Emotional engagement refers to the relationship between the student and themselves. Redmond et al. (2018) explained emotional engagement is important because it enables students to “manage expectations, articulate assumptions, recognize motivations, and commit to learning” (p. 190). Table 2 provides a detailed depiction of the five retention themes offered in each of the articles reviewed for this study.

Table 2. Each Retention Strategy Article Appearance

Strategy	Article*																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Course Development	x	x	x	x		x				x	x		x			x	x		10
Student Success Support	x		x	x		x			x	x	x					x	x		9
Faculty Involvement	x	x				x				x			x		x	x		x	8
Social Engagement		x				x								x		x			4
Emotional Engagement						x								x		x			3

Note. *

1.	Bawa, 2016	7.	Gray & DiLoreto, 2016	13.	Khalid & Quick, 2016
2.	Boton & Gregory., 2015	8.	Jeffreys, 2015	14.	Redmond et al., 2018
3.	Crosling, 2017	9.	McLeod, 2019	15.	Richardson at el., 2016
4.	De Freitas et al., 2015	10.	Milman et al., 2015	16.	Shaw at al., 2016
5.	Fraser et al., 2018	11.	Moisey & Jalovcic, 2015	17.	Travers, 2016
6.	Gaytan, 2015	12.	Muljo et al., 2017	18.	Wingo et al., 2017

Research Trends

The articles reviewed in this study were global. As illustrated in Table 3, 5 different countries were represented in the articles examined. Though most (55.56%) were from the United States, there were a good number of articles (44.44%) from outside of the United States including Australia, Canada, Indonesia, and Malaysia. Though the sample is small, it does indicate the topic of retention is a global issue.

Table 3. Geographic Locations of Authors

Location of First Author	# of Articles	%
United States of America	10	55.56
Australia	4	22.22
Canada	2	11.11
Indonesia	1	5.56
Malaysia	1	5.56

The examination of the articles revealed a mix of qualitative and quantitative research methods were implemented. As depicted in Table 4, 11 studies employed qualitative research methods while 7 of the studies used quantitative research methods.

Of the 18 articles reviewed, 8 different research designs were represented as seen in Table 4. The most common research design was the literature review design representing 26.67% of the articles examined. Case studies, pilot testing, research studies, and surveys were each used in 13.34% of the articles. Questionnaires, framework methods, and experimental methods were observed less frequently in the research with each being seen in 6.67% of the articles.

Table 4. Research Design of Articles

Research Design	# of Articles	%
Literature Review	4	26.67
Case Study	2	13.34
Pilot Testing	2	13.34
Research Study	2	13.34
Survey	2	13.34
Questionnaire	1	6.67
Framework Method	1	6.67
Experimental Method	1	6.67

Four different knowledge areas were represented within the 18 articles reviewed as noted in Table 5. The most common knowledge area observed was that of online courses, environments, and retention. This knowledge area appeared in 61.11% of the articles. The higher education and online higher education knowledge area appeared in 27.78% of the articles reviewed. The final two

knowledge areas, nursing students and community colleges were noted in 5.56% of the articles reviewed.

Seven different research fields were represented in the 18 articles reviewed. The distribution of the research fields is also illustrated in Table 5. The most common research field observed pertained to retention, attrition, and solutions. This research field was the focus of 33.33% of the articles reviewed. The research field of faculty and student perception/presence was the primary concentration of 27.78% of the articles examined. The third most common research field was student engagement, which was noted in 16.67% of the articles considered. Four different research fields each represented only 5.56% of the remaining articles reviewed. Those fields included the implementation of a student success course, students with disabilities, online learning, and influence and factors.

Table 5. Articles Published by Knowledge Areas and Research Fields

	n	%
Knowledge Areas		
<i>Online Courses/Environments/Retention</i>	11	61.11
<i>Higher Education/Online Higher Education</i>	5	27.78
<i>Nursing Students</i>	1	5.56
<i>Community Colleges</i>	1	5.56
Research Fields		
<i>Retention, Attrition, and Solutions</i>	6	33.33
<i>Faculty and Student Perception/Presence</i>	5	27.78
<i>Student Engagement</i>	3	16.67
<i>Implementation of a Student Success Course</i>	1	5.56
<i>Students with Disabilities</i>	1	5.56
<i>Online Learning</i>	1	5.56
<i>Influence and Factors</i>	1	5.56

For this study, the article search was limited to a timeframe ranging from 2015-2019. Most of the articles reviewed were published in 2015 and 2016. In essence, 66.66% of the articles were published in these two years.

The number of articles published declined each year with 16.67% published in 2017, 11.11% published in 2018, and only 5.56% published in 2019. However, it is important to note the 2019 results are influenced by the March 2019 review timeframe. This distribution is illustrated in Table 6.

Table 6. Article Published by Year

Year	# of studies	%
2019	1	5.56
2018	2	11.11
2017	3	16.67
2016	6	33.33
2015	6	33.33

Major Retention Strategies

Having analyzed, reviewed, and examined the empirical content of 18 peer-reviewed research studies, the authors noticeably observed a common trend in student retention strategies. This section provides a list of the most common retention strategies mentioned during the content analysis.

Table 7. Types of Strategies

Types of Strategy	Strategy Detail
Course Development Strategies	Creating effective assessment procedures; offering feedback; utilizing video-lectures, case studies, and multimedia resources; encouraging cognitive engagement; and connecting curriculum to past experiences and future learning goals are common course development strategies.
Student Success Support Strategies	Providing student services, offering student support, making orientation programs mandatory, creating student success courses, developing academic skills, and recognizing the importance of the diversity each student brings to the classroom help support student success.
Faculty Involvement Strategies	Enhancing faculty training and support, developing a lecturers' online presence, encouraging the quality of faculty and student interactions, and providing opportunities for collaborative engagement support faculty involvement.
Social Engagement Strategies	Providing opportunities for social interaction (blogs, chat rooms, wikis, and forums), building community, creating a sense of belonging, and establishing trust help satisfy the need for social engagement.
Emotional Engagement Strategies	Managing expectations, articulating assumptions, recognizing motivations, committing to learning, and student self-discipline influence emotional engagement.
Understanding the profile of students who drops	Understanding the profile of students with high chances to drop is important to design retention and supportive programs
Comprehensive Student Integration	Students from different cultural backgrounds may feel unrepresented and less integrated. Strategies to involve these specific groups and motivate them to increase their intentions to continue their studies will increase retention rates.
Course Development	The development of a course design that may involve students with different learning modes and specific demands might motivate students to continue their studies.
Rethinking the retention process	Rethinking the characteristics of distance learning students and their specific characteristics provide institutions alternatives to retain learners with different demands such as access to scholarships, loans, and financial incentives to continue their studies.

Implications

Retention of online students is a global higher education concern. As more institutions expand online course offerings, the issue is likely to grow. The findings of this research indicate there is a mix of challenges that influence students' ability to persist and succeed in the online classroom. While some of these challenges are outside an institution's control, there are factors higher education institutions can influence. Retention strategies may vary with the demographic differences of student groups (non-traditional, first-generation, students with disabilities, etc.). However, once institutions, as well as faculty, understand the factors they can influence, meaningful strategies can be implemented. This study serves as a place to centralize online retention information to aid future research.

The findings suggest a core set of strategies often utilized to increase retention rates and student success. With an awareness of online retention strategies, institutions can provide effective professional development opportunities to faculty teaching online courses. Additionally, this awareness enables a college or university to focus on student support resources in a meaningful way.

Student retention and success has several implications for students, institutions, and the workforce in general. Retention is required for the long-term success of an institution. Overall student enrollment does not measure an institution's student success; however, the number of students retained and graduated does serve as a measure of success. When retention rates are high, graduation rates tend to increase as well. Increased graduation rates result in more academically prepared graduates who can better meet workforce demands. Ultimately, higher retention rates mean students benefit from completed degrees, the institutions benefit from increased graduation rates and tuition generated from credit-hour production, and the economy benefits from an educated, skilled workforce.

Limitations and Future Research

While this study did centralize online student retention research, it does have limitations. To begin, the study was limited by the timeframe examined and the articles available. Because of this, only 18 articles were reviewed. With the limited parameters, it is possible additional articles pertinent to the topic were not identified. Future research should extend beyond the 5-year timeframe. Next, this study is somewhat limited by the fact that most articles reviewed were qualitative, which tends to be more limited in scope. Future research could benefit from large-scale quantitative research. As online education expands, it may be more realistic to utilize quantitative research methods to examine online student retention. This study is useful for higher education scholars and retention specialists, who need a baseline of key student retention strategies to improve the online classroom.

As previously mentioned, the articles reviewed investigated online retention for entire student populations. Future retention research can be conducted in more specific areas. For example, retention challenges and strategies for students with disabilities could be an area to examine. The perspectives of students with disabilities tend to be absent within higher education research (Moisey & Jalovic, 2015). Additionally, future research should include students from specific populations. This could include non-traditional students, transfer students, and first-generation students. Each one of these population groups has specific factors, which influence their retention rates more and less than other groups. Institutions and students could benefit from a better understanding of strategies that might improve overall retention rates.

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