FEATURE ARTICLE

Characteristics of Learning Frameworks Courses in Texas Public Community Colleges

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ABSTRACT

In this qualitative study, the authors extend the previous research and present findings from a study investigating post-secondary theoretically-based study strategy courses. In Texas, these courses are known as learning frameworks courses, offered for college credit, and derive full-formula funding from the Texas Higher Education Coordinating Board. Researchers focused on learning frameworks courses offered at Texas public community colleges in the Fall 2016 and Spring 2017 semesters. A total of 44 course coordinators or their designees were interviewed via phone or email. Using content analysis, researchers coded data into content categories and thematic units. Findings provide historical, administrative and curricula perspectives including primary distinctions among course topics; theoretical perspectives (or lack thereof); textbooks, resources, and assessment selections; and instructor training. The authors recommended the development of statewide resources to assist institutions in meeting statewide curricula requirements.

One approach to support students' learning in postsecondary education is the offering of learning frameworks courses, also referred to as strategic learning, learning-to-learn, and student success courses—among other names. Offered for college credit in either one-, two-, or three-hour course formats, the hallmark of the curriculum is to introduce students to theories from cognitive, behavioral, and affective domains of educational psychology to underpin the learning strategies taught within the course. The primary goals are fostering students' comprehension of themselves as learners; helping them to increase their self-efficacy, self-regulation and motivation to succeed; teaching them to understand the reasons for engaging in specific study behaviors; and utilizing and transferring new study behaviors to their other courses by embedding the strategies within a disciplinary context. In this paper, we trace the history of learning frameworks courses nationally and within Texas, review research of their effectiveness, and present original findings from a research study investigating the characteristics of learning frameworks courses offered at Texas public community colleges.

Historical Review of Learning Framework Courses

The practice of guiding students in how to succeed in college, including how to navigate the challenges college creates, has its roots in the late 1800s when a new type of course began to appear: first semester courses focused on helping students through the heightened challenges of pursuing higher education (Keup & Barefoot, 2005). Still offered today, freshmen seminar courses, now typically titled *First-Year Seminar* are often part of a robust First-Year Experience Program, offered for one-credit hour, and focus on helping students' transition, acclimate, and integrate into the college environment (Agee & Hodges, 2018).

The Medical Model of Study Skills Instruction

Beginning in the 1920s, courses that focused specifically on study skill development emerged and grew as instructors and students realized the need for them. These courses focused on note-taking, reading comprehension, textbook study methods, time management, examination preparation, and test-taking (Maxwell, 1997). Delineating the sources of textbooks propounding college study skills, Stahl and Henk (1986) listed Whipple's (1927) *How to Study*

Effectively and Bird's (1931) *Effective Study Habits*. Stahl and Henk (1986) also included other such works including the *Student's Guide to Effective Study* (Cole & Ferguson, 1935), the *How to Study Handbook* (Frederick, 1938), and *Diagnostic and Remedial Techniques for Effective Study* (Robinson, 1941).

Yet, most textbooks addressing study skills did not include theoretical perspectives on learning or studying, nor did they advise that students be introduced to learning theory. Instead, these books' content focused on instructional philosophy based on remediation involving practice and skill. Like the medical model, these authors' goal was helping instructors diagnose students' skill and study deficits and then directing them to lessons designed to address students' areas of weakness. By the middle of the 1940s, more than 100 courses began appearing that addressed how to study for students admitted on academic probation and for students needing remedial help. Robinson advocated using his study method Survey Q3R or, as it is now known, SQ3R to address how to survey, question, read, recite, and review in his second study skills book, *Effective Learning* (1936). Robinson described SQ3R as a system supported by scientific management and a higher-level way to study (Stahl & Henk, 1986). Robinson also claimed that his course offered at The Ohio State University addressed how to study effectively for students on- and off-academic probation, and for students that were returning soldiers from World War II. Robinson's (1946) one caveat was that "brighter students benefited the most" from it (p. 1). Through the mid-1980s, these books' authors continued to focus on instructional philosophy based on remediation involving practice and skill. Even when updated in 1974, the seminal textbook *How to Study in College* (Pauk, 1962) focused on skill domains such as the basic on-going skills, the academic skills, and the supportive skills. Addressing the book's lack of theoretical grounding, Pauk argued, "Students are not primarily interested in theory . . . After all, the person who needs penicillin is seldom cured by learning the history of antibiotics" (p. vii, 1974). The same was true for Ellis's bestselling textbook *Becoming a Master Student* (1985). His book, claimed to be filled with "tools, techniques, hints, ideas, illustrations, instructions, procedures, processes, skills, resources and suggestions for success" (1985, inside cover). Yet, void were theory and research-based citations to support the skills and strategies he promoted.

> ...increasing students' metacognitive understanding of themselves and how they use learning methods could motivate, foster, and facilitate transfer of learning strategies into courses in which students experienced difficulty.

Emergent Learning Frameworks Courses

Educators at two Texas institutions were at the forefront of developing emergent learning frameworks courses; their research findings, conducted in the 1990s, began to acknowledge that students learning the theory underlying why study strategies work is essential to grasp holistically, retain, and utilize study strategies. At Texas State University (then Southwest Texas State University), Sellers created a course in 1973 similar to other college reading and study skills courses of the 1970s, with topics such as reading comprehension, vocabulary building, note-taking, time management, and speed reading. However, 1980s theory and research integration slowly transformed the curriculum into an applied learning and behavior management course supported by behavioral, cognitive psychology, adult learning, and student development theories (Hodges, 2014).

At the University of Texas at Austin in 1975, Weinstein also began creating a theory-based learning frameworks course that over time became more rooted in emerging research on learning strategies instruction and disassociated from skill-and-drill study skills instruction (Hodges & Acee, 2017). Learning strategies have been defined as "behaviors and thoughts in which a learner engages and which are intended to influence the learner's encoding process . . . and affect the way in which the learner selects, acquires, organizes, or integrates new knowledge" (Weinstein & Mayer, 1983, p. 1). Studies by Weinstein, Dierking, Husman, Roska, and Powdrill (1998) and Hodges, Seller, and Dochen (2001) provided impetus for learning frameworks courses at the state level by showing statistically significant improved retention and graduation rates for students successfully completing these courses as compared to similar students not enrolled.

In 1997, Cole, Babcock, Goetz, and Weinstein introduced the term *learning framework*[s] as a course fostering students' regulation of learning by developing perspectives of themselves as learners. The intention guiding this course was the idea that increasing students' metacognitive understanding of themselves and how they use learning methods could motivate, foster, and facilitate transfer of learning strategies into courses in which students experienced difficulty.

Prior to 1999, academic success courses could be offered at higher education institutions in Texas,

but all such courses could not generate formula funding. In October 1999, a proposal was submitted to the the Texas Higher Education Coordinating Board (THECB) by Texas State University to change this funding policy based on research and the increased success of students enrolled in what was termed "learning framework[s]" courses. Based on that proposal, the THECB authorized formula funding (of up to three semester credit hours per student) for learning frameworks courses which must focus on "1) research and theory in the psychology of learning, cognition, and motivation, 2) factors that impact learning, and 3) application of learning strategies" (Hill, 2000, p. 1). The critical characteristic of such a course, according to the THECB, "...is the presence of theoretical models as the curricular core" (Hill, 2000, p 1).

As learning frameworks courses became formally recognized in Texas, researchers across the country continued to explore the effects of underpinning theory to learning strategies. Hofer and Yu (2003) researched a psychology course emphasizing self-regulation as a core principle integrating teaching cognitive, metacognitive, behavioral, and social cognitive theory with practical learning, self-regulation, and motivational strategies. Hofer and Yu assessed the course's impact by using Pintrich, Smith, Garcia, and McKeachie's (1993) *Motivated Strategies for Learning Questionnaire* (*MSLQ*) as a pre- and post-course assessment of students and found that the average differences and correlational results showed that students' self-efficacy about learning, their focus on mastery goals, and their sense that the course was important increased. The study also showed that text anxiety decreased. In 2004, Dembo and Seli furthered this work on goal orientation and self-efficacy by showing students why they could and should change their study behaivors. The authors employed a four-step process using self-evaluation, goals, learning strategies, and self-assessment and regulation and used results from two self-report surveys to collect data. The final survey targeted students who had previously stressed that they did not want to change their study behavior because they did not think they needed to. Results showed that, on average, students who did not want to change at course onset believed that they had changed positively as a result of the four-step process. These early studies on learning frameworks courses helped to establish their legitimacy in the eyes of researchers and policy makers, and paved the way for scaling up research and practice in this area.

Recent Investigations

While focusing on psycho-social variables leading to student retention and inclusion in higher education, Kennett and Reed (2009) studied how

academic performance and retention could be improved via a theory-to-practice course. They studied a success course that embedded learning and memory theory, motivation, stress-coping skills, and problem solving and included applications for practicing theory and aiding in its generalization. Data findings indicated that students who were more impulsive and had the lowest self-efficacy were aided most in the course.

In 2011, Tuckman and Kennedy conducted a large investigation of their online, hybrid model, learning theory-driven study course. Using a matched control group of 351 students not taking the learning theory-based study course, the researchers measured the outcomes of the first four terms of both groups' college careers. Though retention status declined overall, course-takers maintained a higher retention rate over the four semesters (93.4%) compared to non-course-takers (85.5%), and a higher GPA with increased odds of graduation (1.69% higher than non-course takers). In another study focused on an online theory-based study skills course—Pryjmachuk and Gills (2012) found that students' confidence and knowledge had grown based on qualitative pre and post surveys and interviews conducted by the researchers. Approaching learning theory-based study strategy courses from yet another angle, Urciuoli and Bluestone (2013) linked a student success course to a content-based psychology course and, using the *Learning and Study Strategies Inventory* (LASSI) as a pre- and post- assessment, found a small effect on attitude (or students' interest regarding college activities and achievement) and concentration. Other investigations by Hoops, Yu, Burridge, and Wolters (2015) and Wolters and Hoops (2015) found that teaching students theory and strategies increased students' self-regulation behaviors.

Also in 2015, Bartoszewski and Gurung used the work of Dunlosky, Rawson, Marsh, Nathan, and Willingham (2013), whose study focused not only on ten specific study strategies and their effectiveness, but also on how these strategies generalized across learning conditions, materials, student traits, and tasks relevant to students' achievement. Of the strategies discussed by Dunlosky et al. (2013), Bartoszewski and Gurung (2015) found that only elaborative interrogation, a form of self-testing involving knowledge retrieval, predicted exam scores in a multiple regression analysis, reinforcing the importance of self-testing as an important learning strategy.

In 2015, Fong, Zientek, Ozel, and Phelps (2015) examined another sparsely researched area related to study strategies: how self-efficacy in motivation, self-regulation, handling of learning resources, and

the strategies students apply in learning is bound to student ethnicity. Their study of a developmental mathematics course found some significant variations in self-efficacy according to students' ethnicities. This study has broader implications for the increasing diverse populations in colleges and for student retention by changing instruction according to the differences in self-efficacy.

Examining college students' perceptions of a theory-based college success course, Hoops and Artrip (2016) reported that students claimed time management and motivation were most important for being effective. Karp, Raufman, Efthimiou, and Ritze (2017) determined that pedagogies integrating college orientation activities, disciplinary content, and academic success skills resulted in higher grade point averages and more credits. In 2018, Hensley, Wolters, Won, and Brady indicated that time management taught within student success courses supported self-regulation development based on a study conducted with probationary and non-probationary students.

While self-regulation is important for students in study strategies course success, in their study, also from 2018, Howard, Moret, Faulconer, Cannon, and Tomlin argue that study skills courses are most effective when they not only teach study strategies and the concept of self-regulation, but also when these courses emphasize transfer strategies to other courses. Howard et al. facilitated transfer of study strategies by having students write metacognitive reflections explaining their use of strategies in other courses. These metacognitive reflections, according to the researchers, proved essential for transfer to occur.

Researchers have also found that students' metacognitive awareness of why some strategies were more effective than others influenced their use of achievement goals (Geller, Toftness, Armstrong, Carpenter, Manz, Coffman, & Lamm, 2018). Driven by "metacognitive awareness" (Geller et al., 2018, p. 683), successful students scheduled practice times for self-testing and studying when they realized that they studied more effectively this way. The researchers posited that most students, without instruction, lack knowledge of what works and why, and continue using unproductive methods.

In sum, learning frameworks courses have been found to help support students' development as strategic learners and enabled them reach higher levels of success in college. Since 1999, when the

THECB approved formula funding, the prevalence of learning frameworks courses in Texas public colleges has grown; many community colleges are even requiring these courses of incoming students. However, little is known about the approaches being used in these courses, topics covered, and the extent to which courses vary from institution to institution. Describing the characteristics of learning frameworks courses at Texas public community colleges could help to reveal common themes, innovative practices, and advance both learning frameworks research and practice. Describing the various approaches used in learning frameworks courses could help educators and administrators make more informed decisions about how to structure and implement their courses. This information could also be valuable to scholars interested in studying the effectiveness of learning frameworks courses across different institutions.

As learning frameworks courses became formally recognized in Texas, researchers across the country continued to explore the effects of underpinning theory to learning strategies.

Methods

The purpose of the current study was to describe characteristics of learning frameworks courses offered at Texas public community colleges in the Fall 2016 and Spring 2017 semesters. The overarching research question was: What are historical, administrative, and curricular characteristics of learning frameworks courses? From a historical perspective, we were interested in when each institution's course was originally established and how it changed over the years. Administrative characteristics of interest included the population of students served, whether it was required or paired with another course, how it was marketed to students, and the types of training provided to instructors. Curricular characteristics of interest were the types of textbooks and assessments used, and the types of topics covered in the course. To obtain data to help answer our research question, we conducted interviews with the community college coordinators (or designees) of learning frameworks courses. We also obtained syllabi for the learning frameworks courses and content analyzed them to determine the types of topics covered.

Institutions with Learning Frameworks Courses

The Texas Higher Education Coordinating Board recognizes 50 public community colleges in Texas. To determine which institutions offered learning frameworks courses in the Fall 2016 and Spring 2017 semesters, we searched each institution's website (e.g., online course catalogs and class schedules)

for course offerings that used the state's designated learning frameworks course prefix/numbers (i.e., EDUC 1100, 1200, 1300; PSYC 1100, 1200, 1300). Out of the 50 total public community colleges, we found that 45 had a learning frameworks course and five did not (see Appendix A). One institution reported designing a learning frameworks course under a different prefix/number for health science professionals, and it was retained in the study. It should be noted that the institutions without learning frameworks courses also may have had courses that offered similar content under a different prefix/numbers that went undetected. Of the 45 institutions with learning frameworks courses, eight had multiple campuses and 37 had a single campus.

Participants

We used a variety of methods to determine the coordinator of each learning frameworks course. These methods involved searching institutional websites, querying institutions via email and phone, and using our personal contacts to help locate the correct person to interview. As part of this process, we recognized that some institutions had a central coordinator that oversaw learning frameworks courses across multiple campuses. In this case, we sought to interview a single person to speak on behalf of the learning frameworks courses being implemented on each campus. When the opposite was true, we sought to interview the learning frameworks coordinator from each campus. Of the eight multi-campus institutions, 4 had one coordinator working across multiple campuses, 2 had separate coordinators for each campus, and 2 had an unknown status because we were unable to contact anyone who could provide this information. Ultimately, a total of 49 learning frameworks coordinators were identified and contacted for an interview, of which 44 agreed to be interviewed (three were designees of the coordinator), yielding a 90% response rate. See Appendix A for a listing of each institution included in this study and details about the learning frameworks course prefix/numbers used coordinator name, and interview method.

Research Design and Data Collection

The current study was a descriptive study that used qualitative data obtained through semi-structured interviews and content analysis of syllabi. The interviews were conducted with learning frameworks coordinators (or their designees) over the phone (*n* = 38) or via email (*n* = 6), when a phone meeting was unable to be scheduled. For phone interviews, trained graduate student researchers asked questions to the interviewee and recorded their responses into a spreadsheet. Phone interviews lasted approximately 45-90 minutes. For email interviews, the interview questions were sent in a Word document for the interviewees to complete and send back via email. A total of 27 questions were included in the interview protocol, in addition to probing questions (for a full listing of these questions contact the senior author). For the purposes of this study, we analyzed data from 10 interview questions (see Appendix B).

In addition, we obtained an example syllabus or detailed syllabus template that represented the learning frameworks courses offered at each interviewee's institution. To determine the types of course topics covered in these courses, we extracted every course topic listed in the course calendar of the syllabus.

Data Analysis

Using content analysis (Krippendorff, 2004), all recorded data was segmented into smaller, interpretable units of analysis, coded into content categories, and then combined into larger thematic units, when applicable. For interview data, researchers examined interviewee responses that were previously recorded into a spreadsheet. Many of the questions were yes/no questions and probed for examples. The results below report the percentage of yes/no responses for each question and further provide content categories that represent the types of examples given, in some cases we also provide specific examples. Content analysis was also used to examine course topics. An expert researcher/practitioner in the field of learning frameworks read each course topic, coded it into a content category, and subsequently grouped these content categories into larger themes, when applicable.

Findings

We organized the findings into historical, administrative, and curricular characteristics of learning frameworks courses. Findings are based on content analyses of interview responses with learning frameworks coordinators (or designees). We also present findings of a content analysis of course topics listed in learning frameworks course calendars obtained from interviewees.

Historical Characteristics

When the courses began. Interviewees were asked to report when their respective Texas public community college began offering learning frameworks courses. The question presented allowed the participant to respond based on their own knowledge of their institutions. While many of the respondents were clear on when the learning frameworks course began, not all were certain of the exact year. Table 1 shows that most institutions initiated their learning frameworks programs within the last decade. In addition, two respondents indicated that the learning frameworks course had begun initially, ceased at some point, and returned to the institution years later.

Table 1
Inception of Each Learning Frameworks Course

Source	F	%
Prior to 2000	2	4
2000-2005	6	14
2006-2010	11	25
2011-2015	22	50
Undetermined	3	7
Total	44	100

How the courses changed. Of the 44 respondents, 32 noted changes to the learning frameworks course over the years, nine noted no mentionable changes, and three noted that changes were unclear or not applicable. Interviewees who indicated changes commonly listed multiple changes. Content analysis of the example changes provided by interviewees revealed various administrative and curricular changes with the most common being changes to the curriculum ($n = 14$), textbook ($n = 12$), and changes in the number of credit hours awarded ($n = 11$). Additional types of changes were to lessons and activities ($n = 7$), making the learning frameworks course a core requirement ($n = 4$), changes to student learning outcomes ($n = 3$), the governing department ($n = 3$), assessments ($n = 2$), eligible students ($n = 2$), the course name ($n = 1$), class size ($n = 1$), and more rigorous instructor credentials ($n = 1$). It should be noted that some of the curricular changes demonstrated attempts to make the course more in-depth and theory-based. For example, one interviewee stated: "It's way more in depth. It used to be…more skills-based for certain classes. Now it's more of a course of learning the theories and approaches that they apply to their other classes, not a tutoring class anymore."

Administrative Changes

Courses designed for special populations. We also asked interviewees if they offered learning frameworks sections designed for special populations or disciplines. Of the 44 interview respondents, 24 (55%) reported learning frameworks sections designed for special populations, with several interviewees listing multiple special populations served. Examples reflected a wide range of responses that included students enrolled with less than 15 credit hours ($n = 5$), those enrolled in dual-credit ($n = 4$), honors program students ($n = 3$), health science majors ($n = 3$), STEM majors ($n = 2$), nontraditional students ($n = 1$), students on academic probation ($n = 1$), student athletes ($n = 1$), teacher education majors ($n = 1$), fire science majors ($n = 1$), English composition ($n = 1$), student veterans ($n = 1$), Dream Catcher Puente Program ($n = 1$), students with disabilities ($n = 1$), TRIO ($n = 1$), first generation students ($n = 1$), engineer majors ($n = 1$), students enrolled in technical programs such as welding and air conditioning tech ($n = 1$), criminal justice majors ($n = 1$), and cosmetology ($n = 1$).

Courses designed for developmental education. We were also interested if any of the learning frameworks sections were specifically designed for students enrolled in developmental education courses. Of the 44 interviewees, eight (18%) responded that they offered a course designed specifically for students in developmental education courses; of those, six reported the learning frameworks course was required for this student population.

Mandated enrollment. Respondents were further asked if their learning frameworks courses were mandated and, if so, for whom. Of the 44 respondents, 12 (27%) indicated it was mandated for all students, 20 (45%) reported that it was mandated for some students, 10 (23%) indicated it was not mandated, and 2 said they did not know. When probed to explain who their courses were mandated for, institutions frequently described more than one student population. Of those stating that their courses were mandated for some, the following types of examples were provided: First Time in College (FTIC) students and those with less than 12-15 credit hours ($n = 10$), based on Texas Success Initiative Assessment (TSIA) scores ($n = 9$), students on suspension and academic probation ($n = 5$), those in a general studies program ($n = 2$), college preparatory program ($n = 2$), Dreamers program ($n = 1$), Burleson Opportunity Fund Scholarship program ($n = 1$), and Mathways program ($n = 1$). Several interviewees mentioned that their institution was in the process of mandating it or still deciding whether to mandate it in future semesters. Also, one interviewee noted that although the course was not officially mandated, advisers commonly describe it to students as a mandatory elective. Finally, it should be noted that 32 (72%) of respondents indicated that their learning frameworks course was mandated for all students or all FTIC students with less than 12-15 credits.

Pairing of learning frameworks course. Interviewees were asked if they paired their learning frameworks courses with another course. Of the 44 interviewees, 15 (34%) indicated that their learning frameworks courses were paired with other courses during the semesters in question, whereas 28 (64%) indicated no pairings and one interviewee was unable

to say definitively if the courses were paired, because pairing happened through informal arrangements with instructors. Our content analysis of the paired-course examples provided by the 15 interviewees (note some interviewees mentioned multiple course pairings) suggested that most were paired with a literacy course: English Composition ($n = 7$), English as a second language ($n = 1$), reading ($n = 1$), integrated reading and writing ($n = 3$). Learning frameworks courses were also paired with mathematics course ($n = 6$). Other learning frameworks course pairing mentioned include: biology ($n = 1$), psychology ($n = 1$), history ($n = 1$), introduction courses ($n = 1$), workforce courses ($n = 1$), and developmental education courses in general ($n = 1$).

Marketing learning frameworks courses. Because marketing strategies were expected to be fundamentally different for institutions that mandate their courses compared to those that do not, responses to the question about how the learning frameworks courses are marketed or advertised were divided into two categories: (a) marketing of learning frameworks that were mandated and (b) marketing of learning frameworks courses that were not mandated. For the first category, campuses where learning frameworks were mandated, information was frequently made available to students at student engagement events or via advisors who would pass on the information. However, a common answer from respondents was that there was no marketing or advertising because the course was a part of the core agenda. As pertains to marketing of learning frameworks that were not mandated, common techniques included handing out flyers and other materials, attending job/career fairs, and providing information at student orientation. Other strategies included a reliance on advisors, counselors, and faculty to relay information to students and other forms of word-of-mouth advertising.

Training for learning frameworks instructors. Most respondents, 33 (75%), indicated that training was available for the instructors. The remaining 11 (25%) noted that there was either no training available or they were unclear if training was available. The requirement for training, when available, was different depending on the type of instructor. Fifteen responses referenced training specific to "new" instructors and of those, 14 required training with a mix of both ongoing professional development such as pedagogy and student engagement and one-time technical training such as course management software. One response referenced a required biannual training for "full-time" instructors. Three responses referenced training for "returning" instructors, with only one of those requiring training, such as conference attendance. The largest response set referenced training for "any" instructor ($n = 20$). Ten of the 20 indicated training was required. Types of training mentioned in responses were webinars, brown bag Fridays, online sharing, conferences, mentoring, in-house training, programs such as AVID, and sessions from organizations such as the Dana Center. The frequency of training expectations included never, one-time, annual, biannual, and ongoing.

Curricular Characteristics

Course topics. Curricular characteristics we examined included the course topics listed in the course calendar of each syllabus obtained from the interviewees. As mentioned in the literature review, the state of Texas requires that these courses address theory, research, and application of the psychology of learning. Therefore, these findings could provide information about the extent to which these courses aligned with this requirement. Of the 44 interviewees, 39 provided a syllabus with sufficient information in their course calendars to include them in the analysis. A total of 930 course topics were extracted, and content analyzed by an expert learning frameworks research/practitioner. The content categories are shown in Appendix C. The category labels were chosen to closely reflect the types of words and phrasing used in the course calendars.

Textbooks. Of the 44 interviewees, 33 (75%) stated they required a specific textbook for all sections of learning frameworks courses, eight (18%) reported they did not require a specific textbook, and three stated they were unsure. Of the three interviewees who said they were unsure, one stated they did not always require a common text, the second said text requirements depended on the semester, and the last stated they were currently piloting books to require a common text for the future. Although eight interviewees reported they did not require a common text, two of the eight mentioned they had common texts available for instructors to use if needed. See Table 2 for a list of all texts reported by the interviewees.

> As the world becomes more complex, technologically advanced, and diverse in the twenty-first century, Texas students deserve the very best in learning frameworks instruction.

Table 2
Texts Used in Learning Frameworks Courses in Fall 2016 and Spring 2017

Title (in alphabetical order)	Authors
A pocket guide to college success	Shushan
Academic transformations: The road to college success	Sellers, Dochen, and Hodges
Becoming a master student	Ellis
College and career success	Marsha
College success: A concise practical guide	Strickland and Strickland
College success: Before, during, and after	Raniseski
Cornerstones for college success	Sherfield and Moody
Emotional intelligence: Achieving academic and career excellence in college and in life	Nelson and Low
Essential study skills	Wong
Motivation in education	Schunk, Meece, and Pintrich
On course	Downing
P.O.W.E.R. learning strategies for success in college and life	Feldmen
Peak performance: Success in college and beyond	Ferret
Student success in college: Doing what works	Harrington
The college experience compact	Baldwin, Tietje, and Stoltz
Keys to community college success	Carter and Kravits
The things they carried	O'Brien
Thriving in college and beyond: Research-based strategies for academic success and personal development	Cuseo, Thompson, Campagna, and Fecas
UT Dana Center resources	UT Dana Center
Your college experience	Gardner and Barefoot
Learning framework	Customized book, Collin College
7 habits of highly effective college students	Covey

Note. The list represents textbooks reported by learning frameworks coordinators (or their designees) who were interviewed in this study. Textbooks listed may have multiple editions.

Assessments. Beyond textbooks, we also asked interviewees the extent to which they used standardized assessments in their learning frameworks courses. Of the 44 respondents, 38 (86%) reported incorporating standardized assessments in their learning frameworks courses, whereas 6 (14%) did not. When probed about the types of assessments used, respondents commonly reported using multiple assessments. The three most common types of assessments reported were personality assessments such as the Myers-Briggs Type Indicator, career assessments such as the Strong Interest Inventory, and learning strategies type assessments such as the Learning and Study Strategies Inventory (see Table 3 for a full listing of the types of assessments reported).

Table 3
Types of Assessments Used in Learning Frameworks Courses.

Source	f
Personality	21
Career	15
Learning Strategies	13
College Success	11
Learning Styles / Preferences	11
Multiple Intelligences	4
Emotional Assessments	3
Other / Miscellaneous	12

Note. Some interviewees listed multiple assessments.

Discussion

The current study helps to document a surge in learning frameworks course offerings across the state and to recognize both similarities and differences in course characteristics. Our findings support the notion that learning frameworks courses are a valued and important focus area for most all Texas public community colleges.

Texas' decision to offer formula funding for these courses (Hill, 2000), along with the need to support growing numbers of students entering college who are academically underprepared (Center for Community College Student Engagement [CCCSE], 2016), likely helped to spur the increase in these course offerings. The majority of community colleges within this study began offering these courses only within the last decade. Many institutions have made substantial changes to the administrative (e.g. mandates, paring, credit hours) and curricular (e.g. textbooks, assessment tools, learning outcomes) characteristics of the course.

Administrative Characteristics

While previous research has focused on the content and goals of learning frameworks courses, differentiating them from orientation, transition, and study skills courses (Cole, et. al., 1997), and demonstrating their effectiveness on learning (as noted in our literature review), this study helps to extend these areas of research by documenting how learning frameworks courses are being implemented to serve the needs of Texas public community colleges. As suggested with the findings of this study, learning frameworks courses are not only offered at 45 out of 50 institutions, but over two-thirds of those interviewed indicated that their learning frameworks courses were mandated for all students or those who are FTIC with less than 12-15 credit hours.

With the diversity that accompanied the growth in the student population for Texas' post-secondary institutions (THECB, 2018), it was imperative that Texas public community colleges identified and implemented supports that catered to specific subpopulations. This study showed 40% of coordinators indicated that their institution designed courses for special populations. Of particular interest, three-quarters of institutions designating learning frameworks sections for students enrolled in a developmental course also made it a requirement. This study finding speaks to research highlighting the importance of additional supports for students deemed academically underprepared and or underserved (CCCSE, 2016).

Another finding of the current study showed one-third of responders indicated offering paired courses (i.e. EDUC 1300 with a STEM-related course). The general practice of pairing courses has been supported in literature—and especially paring student success courses with content-based courses such as the Dana Centers' Framework for Mathematics and Collegiate Learning Course (University of Texas at Austin Charles A. Dana Center, 2019). Further, the study findings in regard to advertising the course in general, for special subpopulations, and for paired courses, were expected to have distinct differences based on if the course was required or not required. If a course was mandated, we found that marketing was either nonexistent or promoted by advisors or listings on one's degree plan. In cases where a mandate was not in place, this study showed advisors played a vital role. Interviewees also mentioned the use of advertising via institutional events.

Curricula Characteristics

This finding indicated that curricula-related characteristics varied by institution. Course topics, textbook choice, and assessment tools were the areas of primary distinction among the learning frameworks courses offered. One main conclusion is that while many of the courses did have somewhat similar course content among institutions (e.g. self-regulatory strategies, goal setting, motivation, metacognition, reading comprehension, strategies for taking notes, etc.), there were some courses not well aligned with the THECB authorized formula funding requirements (see Hill, 2000) or having the presence of theoretical models as the curricular core, based on the course calendar topics listed. Of the 930 topics identified, we also found many topics—while useful and important—were beyond the original intent of the THECB mandated curricula (e.g. careers, communication, financial literacy, and relationships, among many others). We also found controversial topics (e.g., learning styles) promoted within some courses, having sparse research underpinnings.

Although an analysis of each textbook and assessment used is beyond the scope of this study, the findings help to document the variation in the use of these resources, which could be examined in more detail in future research. From some of the textbooks listed that the authors of this study were familiar with, many lacked the theoretical connections to the strategies promotes.

Even with the availability of theory-based textbooks, assessments, instructor manuals, textbook web portals and other supplementary materials used to help assist instructors teaching learning frameworks courses, the need for instructor professional development was not overlooked by institutions. Most coordinators interviewed said that training was available or required for instructors teaching learning frameworks courses. However, training, for some institutions, was often limited to a few days within the beginning of the semester or only for new instructors.

Limitations

All interview data was self-reported and subject to the interviewees' interpretations and available knowledge at the time of the interview. For example, several interviewees did not have complete information on when their learning frameworks courses were initiated and the types of changes made to their courses. In addition, this study is limited in representing the variations in implementation at each institution. Interviewees, for example, described what was expected in general, but did not know the day-to-day implementation fidelity of each course offering. Similarly, data on the course topics extracted from course calendars represents a single syllabus or syllabus template representative of the various course offerings at a single institution and does not necessarily reflect all syllabi or the actual topics covered during class.

Conclusions, Recommendations, and Future Research

This study captured a snap-shot of the historical, administrative, and curriculum characteristics of Texas's public community colleges' learning frameworks courses as reported by 44 coordinators (or their designees) during the Spring 2016 and Fall 2017 semesters. Distinctions among courses were especially prevalent in regard to curricula topics and the integration of theoretical perspectives, textbooks, resources, and assessment selections. While instructor training was common among institutions, the length and types of training varied. While the authors understand the need for each institution to meet the needs of their specific student populations with learning frameworks courses, the authors do recommend statewide resources be developed focusing on

student learning outcomes, curriculum topics, theoretical constructs, and assessments to help foster more standardization that meet the THECB course funding requirements.

Several areas of future research, given the findings, include an investigation of Texas's 4-year institutions' learning frameworks course characteristics. Additionally, a statewide examination of courses' effectiveness on students' academic outcomes (e.g. on retention, graduation rates, for targeted special populations, and for paired courses) would be useful. These investigations would be especially important in helping to meet Texas's strategic plan's overarching goal: "By 2030, at least 60 percent of Texans ages 25-34 will have a certificate or degree (THECB, 2018, p. 8).

Additionally, we expect learning frameworks courses to continue to evolve with breakthrough research and theories that address student success such as how technology affects learning. As the world becomes more complex, technologically advanced, and diverse in the twenty-first century, Texas students deserve the very best in learning frameworks instruction.

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Appendix A

Participating and Non-Participating Texas Community Colleges

Community College	Campus Name	Campus Type	LF Program	Interviewed	LF Course Number
Alamo College	Northeast Lakeview College	Multiple	Yes	Yes	EDUC 1300
Alamo College	Northwest Vista College	Multiple	Yes	Yes	EDUC 1300
Alamo College	Palo Alto College	Multiple	Yes	Yes	EDUC 1300
Alamo College	San Antonio College	Multiple	Yes	Yes	EDUC 1300
Alamo College	St. Philip's College	Multiple	Yes	No	EDUC 1300 PYSC 1300
Alvin Community College	N/A	Single	Yes	Yes	PSYC 1300
Amarillo College	N/A	Single	Yes	Yes	EDUC 1100
Angelina College	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Austin Community College	Cypress Creek Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Eastview Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Elgin Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Hay Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Highland Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Northridge Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Rio Grande Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Riverside Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	Round Rock Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	San Gabriel Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Austin Community College	South Austin Campus	Multiple	Yes	Yes	EDUC 1100 EDUC 1200 EDUC 1300
Blinn College	N/A	Single	Yes	Yes	EDUC 1300
Brazosport College	N/A	Single	Yes	Yes	PSYC 1300
Central Texas College	N/A	Single	Yes	Yes	PSYC 1300
Cisco College	N/A	Single	Yes	Yes	EDUC 1100
Clarendon College	N/A	Single	Yes	Yes	EDUC 1100
Coastal Bend College	Alice Site	Multiple	No	No	N/A
Coastal Bend College	Beeville Campus	Multiple	No	No	N/A

Appendix A (Continued)

Coastal Bend College	Kingsville Site	Multiple	No	No	N/A
Coastal Bend College	Pleasanton Site	Multiple	No	No	N/A
College of the Mainland	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Collin College	Allen Center	Multiple	Yes	Yes	EDUC 1300 PSYC 1100 PSYC 1300
Collin College	Central Park Campus	Multiple	Yes	Yes	EDUC 1300 PSYC 1100 PSYC 1300
Collin College	Courtyard Center	Multiple	Yes	Yes	EDUC 1300 PSYC 1100 PSYC 1300
Collin College	Preston Ridge Campus	Multiple	Yes	Yes	EDUC 1300 PSYC 1100 PSYC 1300
Collin College	Rockwall Center	Multiple	Yes	Yes	EDUC 1300 PSYC 1100 PSYC 1300
Collin College	Spring Creek Campus	Multiple	Yes	Yes	EDUC 1300 PSYC 1100 PSYC 1300
Dallas County Community College District	Brookhaven College	Multiple	Yes	Yes	EDUC 1300 PSYC 1300
Dallas County Community College District	Cedar Valley College	Multiple	Yes	Yes	EDUC 1300 PYSC 1300
Dallas County Community College District	Eastfield College	Multiple	Yes	Yes	EDUC 1300 PYSC 1300
Dallas County Community College District	El Centro College	Multiple	Yes	Yes	EDUC 1300 PYSC 1300
Dallas County Community College District	Mountain View College	Multiple	Yes	Yes	EDUC 1300 PYSC 1300
Dallas County Community College District	North Lake College	Multiple	Yes	Yes	EDUC 1300 PYSC 1300
Dallas County Community College District	Richland College	Multiple	Yes	Yes	EDUC 1300 PYSC 1300
Del Mar College	N/A	Single	Yes	No	EDUC 1300 PYSC 1300
El Paso Community College	N/A	Single	Yes	Yes	EDUC 1300
Frank Phillips College	N/A	Single	Yes	Yes	EDUC 1100 PSYC 1100
Galveston College	N/A	Single	Yes	No	EDUC 1300 PYSC 1300
Grayson College	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Hill College	N/A	Single	Yes	Yes	PSYC 1100 PSYC 1300
Houston Community College System	Central	Multiple	Yes	Yes	EDUC 1300
Houston Community College System	Northeast	Multiple	Yes	No**	EDUC 1300
Houston Community College System	Northwest	Multiple	Yes	No	EDUC 1300
Houston Community College System	Southeast	Multiple	Yes	No	EDUC 1300
Houston Community College System	Southwest	Multiple	Yes	No	EDUC 1300
Howard College	N/A	Single	Yes	Yes	EDUC 1100 PSYC 1100

Appendix A (Continued)

Kilgore College	N/A	Single	Yes	Yes	EDUC 1100 EDUC 1300
Laredo Community College	N/A	Single	Yes	No	
Lee College	N/A	Single	Yes	Yes	EDUC 1200
Lone Star College	CyFair	Multiple	Yes	No	EDUC 1300
Lone Star College	Kingwood Campus	Multiple	Yes	No	EDUC 1300
Lone Star College	Montgomery Campus	Multiple	Yes	No	EDUC 1300
Lone Star College	North Harris Campus	Multiple	Yes	No	EDUC 1300
Lone Star College	Tomball Campus	Multiple	Yes	No	EDUC 1300
Lone Star College	University Park Campus	Multiple	Yes	No	EDUC 1300
McLennan Community College	N/A	Single	Yes	Yes	EDUC 1100 PSYC 1100 EDUC 1300 PSYC 1300
Midland College	N/A	Single	Yes	No	EDUC 1100
Navarro College	N/A	Single	No	No	N/A
North Central Texas College	Bowie Campus	Multiple	Yes	No	EDUC 1300 PSYC 1300
North Central Texas College	Corinth Campus	Multiple	Yes	No	EDUC 1300 PSYC 1300
North Central Texas College	Flower Mound Campus	Multiple	Yes	No	EDUC 1300 PSYC 1300
North Central Texas College	Gainsville Campus	Multiple	Yes	No	EDUC 1300 PSYC 1300
North Central Texas College	Graham Campus	Multiple	Yes	No	EDUC 1300 PSYC 1300
Northeast Texas Community College	N/A	Single	Yes	Yes	EDUC 1300
Odessa College	N/A	Single	Yes	Yes	COLL 0171
Panola College	N/A	Single	No	No	N/A
Paris Junior College	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Ranger College	N/A	Single	Yes	Yes	EDUC 1100 PSYC 1100
San Jacinto College	Central Campus	Multiple	Yes	Yes	EDUC 1300 PSYC 1300
San Jacinto College	North Campus	Multiple	Yes	Yes	EDUC 1300 PSYC 1300
San Jacinto College	South Campus	Multiple	Yes	Yes	EDUC 1300 PSYC 1300
South Plains College	N/A	Single	Yes	Yes	EDUC 1100 EDUC 1300
South Texas College	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Southwest Texas Junior College	N/A	Single	Yes	Yes	EDUC 1100 EDUC 1300
Tarrant County College	Connect Campus	Multiple	No	Yes*	N/A
Tarrant County College	Northeast Campus	Multiple	No	No	N/A
Tarrant County College	Northwest Campus	Multiple	No	No	N/A
Tarrant County College	South Campus	Multiple	No	No	N/A
Tarrant County College	Southeast Campus	Multiple	No	No	N/A
Tarrant County College	Trinity River Campus	Multiple	No	No	N/A

Appendix A (Continued)

Temple College	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Texarkana College	N/A	Single	Yes	Yes	PSYC 1300
Texas Southmost College	N/A	Single	No	No	N/A
Trinity Valley Community College	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Tyler Junior College	N/A	Single	Yes	Yes	EDUC 1300 PSYC 1300
Vernon College	N/A	Single	Yes	Yes	EDUC 1300
Victoria College	N/A	Single	Yes	Yes	EDUC 1300
Weatherford College	N/A	Single	Yes	Yes	EDUC 1300
Western Texas College	N/A	Single	Yes	Yes	EDUC 1100 EDUC 1300 PSYC 1300
Wharton County Junior College	N/A	Single	Yes	Yes	PSYC 1300

Note. * This campus director was interviewed but the course was not recognized as learning frameworks with a course prefix and number of STSC 0111.
** The TACC (Texas Association of Community Colleges) represented Houston Community College as one large system; therefore, one director was interviewed.

Appendix B

Interview Questions Used in the Study

Historical Questions
- When did you first begin offering learning frameworks courses?
- Has your learning frameworks program/courses changed over the years?
    - If so, in what ways (e.g., credit hours, curriculum)?

Administrative Questions
- Are there sections designed for special populations or disciplines?
    - If so, what are those special populations or disciplines?
- Are any of your learning framework courses designed specifically for students enrolled in developmental education courses?
- Are these courses mandatory for all students?
    - Who are the courses mandated for?
- Are your Learning Frameworks course sections paired with another course?
    - If yes, with what course(s) is the Learning Frameworks course paired?
- How are these courses marketed/advertised?
- Is training available or required of instructors?
    - If so, please describe.

Curricular questions
- Does your learning framework course require one specific textbook or textbooks for all sections?
    - If yes, what are the titles and authors of the textbook(s) you use.
    - If no, can you tell me which textbooks your instructors commonly use? (most common, second most common, etc.).
- Does your learning framework course incorporate standardized assessments (e.g. learning strategies assessments or personality inventories)?
    - What assessments do you use?

Appendix C
Categories of Course Topics Listed in Learning Frameworks
Course Calendars in Fall 2016 and Spring 2017

1. Academic integrity / ethics
2. Academic planning / advising
3. Campus introduction / resources / policies
4. Career
    a. Career (in general)
    b. Career and major
    c. Career exploration
    d. Career seeking
5. Communication
    a. Academic communication / discourse
    b. Communication (in general)
    c. Oral communication
6. Diversity / inclusivity
7. Emotional intelligence
8. Financial
    a. Financial aid / scholarships
    b. Financial literacy / money / money management
9. Habits
10. Information literacy / library resources
11. Intelligence / multiple intelligence
12. Leadership
13. Learning and cognition
    a. Brain-based learning
    b. Learning / cognition (in general)
    c. Lifelong learning
    d. Learning strategies
    e. Learning styles / preferences
    f. Learning theories / models
    g. Memory
    h. Thinking strategies
        i. Creative thinking
        ii. Critical thinking
        iii. Decision making
        iv. Problem solving
14. Literacy
    a. Reading strategies / skills
    b. Writing strategies / skills
15. Metacognition
16. Motivation
    a. Attitudes / values
    b. Expectations / beliefs
    c. Goals and goal-setting
    d. Motivation (in general)
17. Note taking
18. Relationships / support structures / interdependence
19. Responsibility
20. Self-awareness / self-reflection
21. Self-change / transformation
22. Self-management / self-regulation
23. Stress / stress management
24. Studying / study skills
25. Success
26. Technological skills / attitudes towards technology
27. Test anxiety
28. Test strategies
29. Time management
30. Wellness