

Historical Review of How-to-Study Courses and the Emergence of First-Year Seminars and Learning Frameworks Courses

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Abstract

Since the 1920s, colleges have offered how-to-study courses orientating students to the rituals of academic study. We present an historical overview of these courses by highlighting major developments including the emergence of courses that evolved from skill-based curriculum underpinned by behaviorism to strategy-based curriculum underpinned by cognitive psychology and self-regulation theories. We also focus on two unique common iterations of course categories offered today: first-year seminars, which were re-envisioned by the University of South Carolina in the 1970s, and theory-based learning strategy courses, often referred to as learning frameworks courses, which emerged in the 1970s at two Texas universities.

Keywords: how-to-study courses, learning frameworks courses, first-year seminar courses, theory-based learning strategy courses

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For many students, learning in college can be challenging. To provide support, postsecondary institutions have implemented how-to-study courses, a term for formalized courses that instruct students in utilizing skills and strategies of academic learning and facilitating students' transitions in college, for example, by helping them adapt to the campus culture and environment. With course names such as *College 101*, *Introduction to College*, *Effective Learning*, *University Seminar*, *College Orientation*, *Learning-to-Learn*, *Strategic Learning*, and *Learning Frameworks*—among many others—these courses are often offered in 1-, 2-, or 3-credit hour formats, but the specific aims and foci of these courses vary considerably in the literature and in practice. The purpose of this article is to provide an historical perspective of postsecondary how-to-study course offerings and to provide descriptions and curricula of two unique course categories that have emerged for today's college student: first-year seminars and learning frameworks courses.

The Development of How-to-Study Courses

One of the earliest known authors to address the art of study was Reverend Isaac Watts, a prolific Christian hymn writer best known for *Joy to the World*. Watts lived in England in the late 17th and early 18th centuries and authored a number of books on learning,

including *Improvement of the Mind*, first published in 1741. His chapter titled “Of Study or Meditation,” posed 16 recommendations on studying, many of which resonate true today such as recommendation number 11:

Let every particular study have due and proper time assigned it, and let not a favourite Science prevail with you to lay out such Hours upon it as ought to be employed upon the more necessary and more important Affairs or Studies of your Profession. (Watts, 1741, p. 205)

Nevertheless, the study methods needed for college success varied little in the 18th and 19th centuries as students’ formal learning was based on authoritarian-type class instruction with students expected to emulate their teachers’ thinking and provide evidence of their learning through rote memorization and oral drill assessments (Blake, 1953).

Beginning in the 20th century, forms of instruction and assessments began to transform with the birth of the college elective system in the 1920s and 30s. Postsecondary institutions also began offering more holistic support to students with the development of guidance services (Blake, 1953), including study skills instruction. Although books had been written for teachers to introduce study skills to their students in primary and secondary schools, such as *The Art of Study* (Hinsdale, 1900) and *How to Study, and Teaching How to Study* (McMurry, 1909), it was not until 1916, when Guy

Whipple, a professor of education at the University of Illinois, authored his first edition of *How to Study Effectively* (Whipple, 1916), which was written specifically for high school and college students.

During the early part of the 20th century, approximately 60 colleges and universities began creating special orientation and how-to-study courses to help students better adjust to college and offer them study skills instruction (Book, 1927). The University of Buffalo, for example, offered a how-to-study course for underachieving applicants in 1926, as did the University of Minnesota in 1932 as part of their curriculum for their newly instituted General College, which had been designed to accommodate an open admissions policy (Wyatt, 1992). Many institutions were requiring all first-year students to enroll in their how-to-study course (Book, 1927). According to Enright (1994), these courses included topics on “time management, library skills, outlining, notetaking, studying for tests, and reading efficiency” (p. 32). During this period, authors also began publishing textbooks for students enrolled in these courses such as *How to Study in College* (Headley, 1926), *Learning How to Study and Work Effectively* (Book, 1926), *How to Succeed in College* (Book, 1927), and *Effective Study Procedures in Junior College and Lower Division Courses* (von Kleinsmid & Touton, 1929). Many of these textbooks were replete with research on outcomes from students enrolled in how-to-study

courses at the authors' institutions. For an example of this early research, see Book (1927).

In the early 1930s, Charles Bird, author of *Effective Study Habits* (1931), provided educators with a glimpse into how the University of Minnesota's how-to-study course originated. Bird stated that the university first offered a 3-hour a week non-credit course over a 5-week period with 100 students registered. He then provided details on how the course evolved into a course for college credit:

Because the scholarship records of students enrolled in these classes were superior to those of control groups of comparable character, we lengthened the course and granted college credits to students who completed it. In the new course, instruction could be adequately supplemented with practice study under guidance, and the students were obliged to devote time outside the class-room [*sic*] to completing exercises. Approximately 300 students each succeeding year have elected to receive this training in study techniques. (Bird, 1931, p. v)

By the 1940s, additional study guides, textbooks, programs, and how-to-study course offerings became more specialized focusing on study methods for students needing remedial and reading support and for students on academic probation. This was especially true due to the Servicemen's Readjustment Act of 1944, popularly known as the G.I Bill of Rights, which brought a large expansion of

students to higher education (Wyatt, 1992). During this period, reading was singled out as the most important skill for college students and many remedial reading programs—often offered in the form of laboratories instead of classrooms at that time—emerged from an institution’s how-to-study course curriculum (Enright, 1994). Francis Robinson, a prominent educational psychologist from The Ohio State University, published *Diagnostic and Remedial Techniques for Effective Study* (1941). The manual was written as a self-help guide for students to use with guidance counselors. Students would take reading and other diagnostic assessments within the manual to discover problem areas and then engage in remedial measures that were indicated (APA Psyc Net, n.d.). The manual was revised into Robinson’s *Effective Study* (1946) textbook, whereby his SQ3R method emerged as a popular systematic study approach using the process of survey, question, read, recite, and review. At the time his book was published, Robinson claimed that over 100 colleges had remedial reading and how-to-study programs to promote students’ success (Robinson, 1946).

By the early 1950s, 90% of colleges in the United States were offering some kind of study skills course, and 10% required such a course to be taken by all students (Blake, 1953, as cited by Entwisle, 1960). Many of the study skills textbooks written for college-bound high school and college students published in the late 1950s and

early 1960s continued to promote study skill-based approaches. For example, in 1962, Walter Pauk, director of Cornell University's Reading-Study Center, published the first of many future editions of his influential textbook *How to Study in College*. Conceived "with extensive trial and experiment based on the most widely tested educational and learning theory" (p. vii), Pauk introduced students to study skill techniques including what has come to be known as the Cornell Notetaking System. In his second edition, Pauk (1974) re-arranged his chapters into skill-based categories using titles such as "The Supportive Skills" (e.g., concentration, forgetting, memory); "The Basic On-Going Skills" (e.g., vocabulary building, reading skills); "The Academic Skills" (e.g., note-taking, textbook reading, marking and note-taking, studying for exams, taking exams, writing good papers, research papers); and "The Specialized Skills" (e.g., studying mathematics, studying science, speaking effectively, mastering foreign language) (see Contents section). Although research was often cited to support the topics being promoted, the contents were void of theoretical constructs. In both his first and second book editions (1962, 1974), Pauk even defended the absence of theory in his book. In his first edition, he stated that based on his 9 years of experience directing Cornell University's Reading-Study Center at that time, he found that:

Students are not primarily interested in theory, and most of them have little patience with merely inspirational talk. What

they mainly want is simple, practical instruction on how to tackle and overcome their special difficulties. ... While theory is always implicit, and is sometimes given in enough detail to assure the skeptic or explain the rationale of a recommended technique, it is never presented without explicit instruction on how to apply it, and it is never used simply as exhortation. After all, the person who needs penicillin is seldom cured by learning the history of antibiotics. (1962, p. vii)

During this period, behaviorism was the dominant perspective in psychology through the mid-20th century and denotes learning in terms of observable stimulus-response phenomena of learning. However, cognitive theories became the prevailing perspective by the late 1970s and opened the door for how-to-study course instructors to teach theoretical constructs to their students. Cognitive theories focused on how incoming information is processed and structured, the construction of knowledge and skills, and the internal processes that affect behavior—including thoughts, beliefs and feeling—instead of just the behavior itself (Weinstein & Mayer, 1986).

Early research on cognitive strategies investigated surface-level mnemonic strategies and their effects on recall (Wood, 1967). Over the next decade, researchers began showing that deep-level cognitive strategies (e.g., elaboration and organization strategies; Weinstein & Mayer, 1986) were critical for mastering more complex

learning tasks. These cognitive strategies were rooted in principles of generative learning (Wittrock, 1974) which posited that, to construct knowledge, students must elaborate the new information they are trying to learn with their own ideas and connect this new information with their prior knowledge and experiences. Learners were no longer being viewed as passive recipients of teachers' lessons, rather as active learners who generate their own knowledge through active learning. However, by the mid-1980s, researchers found that students were unlikely to use cognitive strategies outside of laboratory contexts and unlikely to transfer their learning to new situations (Pressley & McCormick, 1995; Zimmerman, 2008). Teaching isolated study skills and cognitive strategies were insufficient to produce lasting effects on students' learning. A more comprehensive, interactive, and flexible approach was needed.

To address this issue, contemporary models of strategic and self-regulated learning (e.g., Pintrich, 2004; Weinstein et al., 2000; Zimmerman, 2000) emphasized interactions among cognitive, metacognitive, motivational, affective, behavioral, and environmental factors in fostering effective learning. They emphasized the use of learning strategies broadly defined (e.g., cognitive strategies and motivational strategies) as well as the development of self-regulatory processes that enable students to proactively manage their learning and adapt their use of strategies to reach learning goals more effectively and efficiently.

Contemporary views recognized the role of teaching students' models of learning because, as the literature on the transfer of learning has rightly noted, "[b]y identifying the underlying principles of actions, thoughts, perceptions, and operations we can facilitate the transfer of knowledge to contexts that are fundamentally dissimilar from those that are initially encountered" (Hajian, 2019, pp. 96–97). In other words, understanding, theoretically, how learning works, and the abstract reasoning behind why learning strategies are effective, was found to have practical value for the purpose of applying learning strategies to new tasks. Similarly, teaching heuristics (rules of thumb, rather than algorithmic recipes for learning) became favored because it allowed greater flexibility for students to adapt their strategic approaches to the situation and their individual differences. In addition to teaching theories, models, and heuristics of learning, learning inventories also became prevalent for fostering strategic learning by helping students formally assess and reflect on improving their study methods. For example, the *Learning and Study Strategies Inventory (LASSI)*, developed by Weinstein et al. (1987), is based on 10 scales that assess skill, will, and self-regulation processes.

In the late 20th and early 21st centuries, cognitive theory and learning strategies began to appear in student success textbooks such as Herlin and Albrecht (1989) *Study & Learning: The Development of Skill, Attitude and Style*, and Dembo's *Learning*

Strategies: A Self-Management Approach (2000). Researchers analyzed 53 study skills textbooks published from 1994–2005 and found they addressed similar topics—94% addressed 11 out of the following 18 topics:

managing time, reading, note-taking, test taking, preparing for tests, memory and learning, anxiety and stress, listening, structuring the environment, setting goals, assignments: writing and presenting, motivation, classroom behavior, getting help or resources, using the library, technology, learning style, and developing vocabulary. (Hadwin et al., 2005, as cited in Winne, 2013, p. 388)

Although various learning strategies and study skills were prevalent in this investigation, few textbooks had content on self-regulated learning processes (Hadwin et al., 2005, as cited in Winne, 2013).

Over the years, various college courses have addressed how-to-study curriculum to different degrees along with other areas related to college success such as college knowledge and adjustment. Cole et al. (1997) created six student success course categories based on an analysis of syllabi and course content from lower-level college introductory courses to higher-level theory-based courses.

Orientation courses introduced students to an overview of the institution, such as campus resources and location. *Navigation* courses extended this topic by providing instruction on how and

when to use campus resources. *Academic and Personal Development* courses, such as first-year seminars, facilitated students' transition from high school (and potentially other areas) to college and could contain elements of orientation, navigation, study skills, institutional commitment, and other areas deemed relevant to college transition. *Learning-to-Learn* courses instructed students in study skills and learning strategies and introduced students to some theory. *Critical Thinking* courses promoted independent thought, problem solving and decision making. *Learning Framework[s]* courses, which are deeply rooted in educational psychology theory, engaged students in a process of self-discovery and analysis to facilitate their development of perspectives about themselves as learners so they can monitor and regulate their own learning (Cole et al., 1997). Of particular interest for our purposes here are first-year seminars (FYS) and learning frameworks courses. These are two of the primary course categories currently offered at postsecondary institutions today.

First-Year Seminars

First-Year Seminars (FYS)—also referred to as “first-year experience courses, study skills, student development or new student orientation courses” (U.S. Department of Education, 2016b, p. 1), among other names—are intended to scaffold students successfully through their first year of college. FYS began to appear in higher education with the goal of helping students to navigate

college-related challenges and to help students acclimate to the college culture and environment (Keup & Barefoot, 2005). Boston College pioneered the first non-credit freshman orientation class in 1888 (Gardner, 1986 as cited by Bigger, 2005). In 1911, Reed College (Portland, OR) offered the first orientation course for college credit in separate men and women sections. The course met 2 hr per week for the year (Gardner, 1986, as cited by Bigger, 2005). Note that the popularity of these courses fluctuated and nearly vanished by the 1960s. Yet the birth of the contemporary FYS movement is attributed to the Civil Rights Movement, with the president of the University of South Carolina in 1971 re-envisioning the seminar as he sought to establish trust and cooperation between students, staff, and faculty to enhance student retention and improve teaching in the institution's undergraduate programs. Postsecondary institutions throughout the U.S would replicate the seminar on their own campuses (University of South Carolina, n.d.).

Now ubiquitously offered at both 2- and 4-year institutions for college credit, FYS have various objectives and curricula. Barefoot and Fidler (1992) identified five types of FYS: *extended orientation*, *academic seminars with uniform or variable content*, *introduction to discipline-specific fields of study or professional seminars*, and *basic study skills*. *Hybrid seminars* combining several course types also exist (Tobolowsky & Associates, 2008).

The most common FYS type is the extended orientation seminar, which has the goal of helping students transition into a college setting by instructing students in study skills instruction, campus resource knowledge, time management, career preparation, campus policies, and academic advising (U.S Department of Education, 2016b). We also found extended orientation seminars that encouraged students to set community-oriented goals, cultivate and maintain relationships, enhance interpersonal skills, incorporate citizen education (Clouse, 2012), promote social justice and multicultural awareness, encourage academic and campus engagement, foster faculty and peer interaction (Hatch-Tocaimaza et al., 2019), and engage in self-care (Dyar, 2022).

Academic seminars are increasing in number with either uniform curriculum (i.e., all sections have a set curriculum) or variable content (i.e., different sections vary by topic and/or the expertise of the faculty member). Academic seminars may also help students develop their writing, critical thinking, and study skills. Discipline and profession seminars introduce students to the demands of their major and their eventual career choice. Basic study skills seminars focus on building students' skills such as time management and note-taking (U.S. Department of Education, 2016b).

Deemed a high impact educational practice by the Association of American Colleges and Universities (Kuh, 2008), FYS are often taught in tandem with an institution's First-Year Experience

(FYE)—a phrase coined by John Gardner, who is considered the founder of the movement (Koch & Gardner, 2014). FYE programs commonly incorporate annual common intellectual themes with related readings, speakers, films, fine arts and symposia (Agee et al., 2018). Course goals and content vary across courses, but some of the common goals, in order of prevalence, found by Barefoot and Fidler (1992) included: develop academic skills, provide knowledge of campus resources, ease transition from high school to college, develop major and career plans, provide opportunity for interaction with faculty, develop student support groups, help student feel connected to the institution, introduce the purpose of higher education, create campus community, and develop values and ethics.

Sample First-Year Seminar Curriculum and Course Design

In a unique course design, Dyar (2022) implemented an FYS hybrid course that pitches the characteristics of a good learner as “a form of self-care” (p. 77). Students first verbalize what they want to gain from the course and what concerns they have about college. Students then take a learning strategy self-assessment and another on self-care strategy use; students then formulate goals and a learning/self-care plan. Students then form groups for peer support and to cultivate a sense of community. The course then covers topics such as learning strategies, campus resources for academic and for wellness purposes, metacognitive skills for both academic

and mindfulness strategies, how mindset and affect guides both learning and interpersonal development, how effective study strategies use is a form of self-care, and how to engage with others and your community in a caring way.

Learning Frameworks Courses

Learning frameworks courses, also known as strategic learning courses, learning strategy courses, and learning-to-learn courses—among other names—represent the most recent manifestation of courses created to teach students the art of college study. Traditionally, study skills courses promote study techniques and topics that are taught in isolation. Research and theory underpinning those skills and topics are usually absent from the curriculum. Learning frameworks courses differ by including research and theory from behavioral, cognitive, motivational, and adult learning approaches, among others, to underpin the strategies and skills that are promoted to students. These courses integrate learning theory with learning strategies so that students understand the reasons for engaging in specific study behaviors and to help them adapt to differing circumstances. A primary goal is to foster students' abilities to monitor and regulate their own learning through an understanding of themselves as learners and, often, through using self-regulated learning principles. Students then develop individualized learning strategies based on their knowledge of current theories (Agee et al., 2018) and through

feedback gained from self-regulating their use of learning strategies. According to Weinstein et al. (2004) the ultimate goal is to help facilitate students' transfer of what they are learning in these courses to other coursework and future learning.

Two "Model" Learning Framework Courses

Learning frameworks courses were authorized in 1999 by the Texas Higher Education Coordinating Board (THECB) to generate formula funding for up to three semester credit hours. Courses were expected to 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). A critical characteristic of such a course, according to the THECB, was "the presence of theoretical models as the curricular core" (Hill, 2000, p. 1). Not only was teaching theory practically useful for teaching learning strategies, but it also helped to justify that the material being taught in learning frameworks courses was at the college level, like other college-level psychology courses, and worthy of formula funding.

Educators from two universities in Texas (Texas State University [TXST] and University of Texas at Austin [UT Austin]) are credited for creating the first of these theory-based learning frameworks courses. According to Hill (2000), both courses were deemed "model courses" by the THECB (p. 2).

Educational Psychology (EDP) 1350, Effective Learning

In 1973, De Sellers, an educational specialist at Southwest Texas State University, now TXST, was hired to create an elective 3-credit-hour psychology course to enhance students' academic success (Lollar & Pipper, 2022). According to Carol Dochen, long time director of TXST's Student Learning Assistance Center:

Psychology 1320 [now EDP 1350, Effective Learning] began as a typical learning and study skills course covering topics on reading skills, comprehension, vocabulary, note-taking, time management, and test-taking skills. But there was one important exception. De [Sellers] began incorporating learning theories, such as behaviorism [behavior modification], to underpin the skills and strategies she taught, along with a self-change project for students to apply behavioral techniques to their own learning and lives. As time went on, metacognitive, cognitive, and memory theories such as information processing models were added along with theories and concepts from the affective learning domain. De [Sellers] was at the cutting edge in her approach and is credited for creating what are now referred to as "learning frameworks" courses offered throughout Texas and the nation. (Lollar & Pipper, 2022, p. 39)

Hodges et al. (2019b) described the EDP 1350 current curriculum that interweaves (a) pre-and post-self-assessments, (b) self-

regulation theory and strategies, and (c) cognitive theory and strategies. Standardized *self-assessments* are administered such as the *LASSI* (Weinstein et al., 2016) and *Myers Briggs Type Indicator* (Briggs & Myers, 1998), along with textbook chapter self-assessments and journal questions so that students can reflect on their areas of strengths and areas for growth. To promote *self-regulation*, students focus on overt behaviors (e.g., self-monitoring, setting goals, and time planning), and affective and non-cognitive dimensions of learning. Also included are lessons on social cognitive theory of self-regulation (see Bandura, 1991); self-efficacy (see Bandura, 1991; Branden, 1994); self-discipline (see Peck, 1978); Maslow's hierarchy of needs theory (see Maslow, 1954); and expectancy-value theory of achievement (see Wigfield & Eccles, 2000). Students also study concepts on flow (see Csíkszentmihályi, 2008), willpower (see McGonigal, 2012), mindset (see Dweck, 2006), and stress and anxiety management (see Hanson & Mendius, 2009). Additionally, students engage in a 4-week, self-management project underpinned from behavioral psychology. *Cognitive* theories such as information processing models (see Atkinson & Shiffrin, 1968), and memory theory based on the structure, function, and plasticity of the brain (see Smilkstein, 2011) underpinned cognitive strategies such as rehearsal, elaboration, and organizational techniques (see Weinstein & Acee, 2018). Primary types of knowledge—declarative, procedural, and conditional (see Anderson & Krathwohl, 2001;

Gagne, 1985)—were taught to enrich students’ understanding of the acquisition of knowledge through different modalities as well as the concept of metacognition (see Flavell, 1979; McGuire et al., 2015).

Hodges et al. (2019b), also conveyed that much class time is devoted to practice exercises to help students transfer learning strategies across their academic programs. He indicated that over the years, several categories of students registered for the course, including students admitted under conditional admission categories, those admitted in summer bridge programs, and those experiencing academic difficulties. Doctoral students pursuing degrees in developmental education served as instructors as well as faculty members.

Educational Psychology (EDP) 310, Individual Learning Skills

Claire Ellen Weinstein, professor at UT Austin, was renowned for her groundbreaking research on learning strategies (McCombs, 2017) and as senior author of the *LASSI* (Weinstein et al., 1987, 2002, 2016). Weinstein also created one of the nation’s first learning frameworks courses. First offered in 1975 at UT Austin, EDP 310, Individual Learning Skills, was a college-level, 3-credit hour course open to all undergraduate students wanting to improve their success in college, and, at times, required for some students (e.g., over the years it was required by certain programs and for students on academic probation). As the course developed, Weinstein interlaced cognitive, metacognitive, motivational, affective, and

behavioral domains of learning—both theories and strategies—to help students to become more strategic and self-regulated lifelong learners capable of reaching their academic goals in college (Hodges & Acee, 2017). Various areas were addressed relating to skill (e.g., learning strategies, problem-solving, self-knowledge, and academic task knowledge); will (e.g., self-efficacy, future time perspective, goal setting, goal analysis, and academic emotions); self-regulation (e.g., time managing, concentrating, using a systematic approach to learning, comprehension monitoring, self-testing, and academic help seeking); and the academic environment (e.g., teacher's beliefs and expectations, available resources, and social context and support). Weinstein's model of strategic learning underpinned and helped to organize the course content; she posited that strategic learning emerges from interactions among constructs within these four major model components: skill, will, self-regulation, and the academic environment (Weinstein & Acee, 2018).

Weinstein believed that all learners could be taught to use learning strategies and improve their learning. She defined learning strategies broadly and not strictly as cognitive:

These techniques, referred to as learning strategies, can be defined as behaviors and thoughts that a learner engages in during learning and that are intended to influence the learner's encoding process. Thus, the goal of any particular learning strategy may be to affect the learner's motivational or

affective state, or the way in which the learner selects, acquires, organizes, or integrates new knowledge. (Weinstein & Mayer, 1986, p. 316)

In EDP 310, students first completed the *LASSI*, an 80-item assessment of students' awareness about and use of learning and study strategies related to skill, will, and self-regulation components of strategic learning. The 10 scales included: anxiety, attitude, concentration, information processing, motivation, self-testing, selecting main ideas, test strategies, time management, and using academic resources (see the latest version of the *LASSI*, Weinstein et al, 2016). Both classroom instruction and, in later years, online *LASSI* instructional modules (Weinstein & Acee, 2020), were used as part of the curriculum (Weinstein & Acee, 2013). EDP 310 targeted students who enter the university under special circumstances or who experience academic difficulty after reentry. Advanced doctoral students in educational psychology served as instructors (Weinstein, 2018). In 2017, the course prefix and title were revised to EDP 304, Strategic Learning for the Twenty-First Century. The current course description reads:

Explores a wide range of subjects in educational psychology that impact student learning, including theories of cognition and motivation, and applying them to academic work.

Appropriate for students interested in learning more about basic theories of educational psychology, seeking to improve

performance in their classes, as well as those experiencing difficulty succeeding academically at the University. (Texas Education: The University of Texas at Austin, College of Education, n.d.)

Since their approval by the THECB, many institutions in Texas have established learning frameworks courses. In fact, approximately 90% of Texas community colleges now offer these courses, many of which require enrollment of first-year students (Hodges et al., 2019a).

Research Outcomes on First-Year Seminars and Learning Framework Courses

As previously explained, postsecondary institutions offering courses to promote college success vary widely in the content addressed and approaches used. For our purposes here, we have honed our focus on first-year seminar and learning frameworks courses. Even within these two categories of courses, in practice, course content and instructional approaches can vary in substantive ways and potentially lead to different outcomes for students. However, overall, the available research on FYS and learning frameworks courses suggest benefits for the students enrolled, notwithstanding some mixed results and the need for further research. What follows is a brief review of some of the evidence regarding the effects of first-year seminars and learning frameworks courses on various academic outcomes.

First-Year Seminar Outcomes

Cho and Karp (2012) found that students enrolled in FYS in their first semester are more likely to earn college credit during the first year, and more likely to persist to the second year as compared to students not enrolled in the course. Zeidenberg et al. (2007) used Florida Department of Education data to track a cohort of all students who enrolled in a FYS at a Florida community college as first-time students in fall 1999. Students were tracked for a total of 17 semesters, and results indicated that the institution's FYS correlated with a positive effect on credential completion, persistence, and transferring to 4-year institutions. Additionally, the What Works Clearinghouse (U.S. Department of Education, 2016b) identified 97 eligible studies that investigated the effects of FYS for college students. However, only four of the 97 met WWC's rigorous research group design standards (see Clouse, 2012; Jamelske, 2009; Shoemaker, 1995; and Wilkerson, 2008). The four studies together included a total 12,091 first-year college students in four colleges across the United States. Based on their analysis of these four studies, the WWC considers the extent of evidence for FYS courses is large for credit accumulation and small for college degree attainment and general college academic achievement (U.S. Department of Education, 2016b).

Researchers have also shown that FYS can be effective for certain populations of students. For instance, Mendez et al. (2020)

examined the impact of an 3-credit hour FYS for elective credit for students at an emerging Hispanic-Serving Institution by investigating the academic and financial factors that affect persistence and dropout risk. Although results showed small positive effects for the general population, the largest benefits were seen for students from underserved groups. After taking the course, lower socioeconomic background students were 43% more likely to return for their second year as compared to those not enrolled in the course. Women were 27% more likely to return and African American males were twice as likely to return. Pickenpaugh et al. (2021) also found that students undeclared in their major taking FYS increased their grade point average by 0.4 in the first-term and increased retention rates to their second year by about 10% as compared to undeclared students not enrolled in the FYS course.

Additionally, the WWC identified 19 eligible studies that investigated the effects of FYS for students enrolled in developmental education. Of these, however, only one study was a randomized controlled trial that met WWC rigorous group design standards without reservations. Specifically, Rutschow et al. (2012) conducted a randomized controlled trial over three semesters (spring 2008 through spring 2009) to evaluate a 2-credit hour FYS for students enrolled in developmental education courses at a technical community college in the southeast United States. However, there were no statistically significant differences between

FYS participants and comparison participants on either the percentage of students passing all courses or the percentage of students receiving a GPA of “C” or better. Additionally, the study revealed neither a statistically significant nor substantively important effect for students’ progress through the developmental education course sequence, credit accumulation and persistence (U.S. Department of Education, 2016a).

Learning Frameworks Outcomes

Research investigating student outcomes on learning framework courses have also produced positive results. For example, Pintrich et al. (1987) developed a 4-credit hour introductory cognitive psychology course at the University of Michigan titled *Learning to Learn*. First offered in 1982, the course provided instruction in theory and research in cognitive psychology and in the application of learning strategies. Outcomes of the course were described as producing significant changes in student’ self-reports of using learning strategies and small changes in students’ grade point averages (Pintrich et al., 1987). A subsequent study (Hofer & Yu, 2003) found that after adding motivational factors and refining the conceptual model used in the course, students made statistically significant positive changes on measures of self-efficacy for learning, valuing of course material, use of cognitive strategies, and test anxiety.

Early research conducted separately by researchers at TXST (Hodges et al., 2001) and UT Austin (Weinstein et al., 1998) showed statistically significant improvement in retention, grade point average, and graduation rates for students who successfully completed a 3-credit hour learning frameworks course compared to students not enroll in these courses. For example, after having demonstrated multiple years of statistically significant increases on students' pretest to posttest LASSI and reading comprehension scores, Weinstein et al. (1997) compared the 5-year graduation rates of students who took her learning frameworks courses to the general population of students. Despite having lower SAT scores, those who took the learning frameworks course graduated at 71%, compared to 55% for the general population of students. UT Austin and TXST studies also helped to influence the THECB to allow Texas higher education institutions to generate formula funding for learning frameworks courses in Texas.

In more recent studies, Tuckman & Kennedy (2011) examined the effect of students taking a learning strategies online (hybrid) course on grade point average, retention, and graduation rate. The researchers examined the results of 351 first-year students over their first four terms in comparison with 351 matched non-course takers. First-year students who took the course in their first term had statistically significantly higher grade point averages in each of their first 4 terms. Students completing the course also demonstrated

statistically significantly higher retention rates and were six times more likely to be retained. In addition, they had statistically significantly higher graduation rates than did their matched controls.

In a qualitative investigation at a 4-year university in the southwestern United States, Hodges (2019b) sought to identify the perceived salient factors that students identified after completing a learning frameworks course. The researchers concluded that the most robust salient factors identified by students occurred in the behavioral domain (e.g., study and self-management strategies), followed by the affective domain (e.g., increased motivation and locus of control, lessening anxiety and stress) and cognitive domains (e.g., help-seeking strategies, note-taking skills improved writing, and learning about brain function). Additionally, Hensley et al. (2021) found that a learning-to-learn course underpinned by self-determination theory resulted in students having a greater sense of autonomy, competence, and relatedness. The teacher's instructional approach factored into how students viewed their roles in the class as well as if they felt welcome, appreciated, and involved in the course. Students who had a greater sense of relatedness had better results in the course.

Conclusion and Implications for Research and Practice

Understanding the history of a field of research and practice is critical for one to utilize wisely the knowledge and innovations of

that field and make future contributions. For practitioners and researchers alike, we need to understand where our field has been to determine where we stand now and where we should go next. Our review of the history of how-to-study courses and its intertwined history with research movements and innovations in educational psychology show that the field has made tremendous strides forward in more holistically supporting college students' learning and transition success. From basic study skills courses to learning frameworks courses, from basic orientation courses to FYS, practitioners have incorporated research developments as well as their own on-the-ground ideas for supporting students in college.

Today, most all courses and textbooks that address how-to-study curriculum emphasize the role of active learning and learning strategies over passive rote approaches of the past. Furthermore, it is now more common than in the past for courses and textbooks to address motivation, self-regulation, conceptual models of learning, and assessments that provide students with feedback on their studying approaches. As Hodges et al. (2019a) showed, some courses address a wide range of topics that stretch beyond traditional how-to-study curriculum and into social, occupational, personal, and life skills development, and admittedly we know very little about the utility of addressing these topics and whether they should be taught separately or alongside how-to-study courses. As we reviewed the research on FYS and learning frameworks courses,

we found an overall trend of positive effects of these courses on academic outcomes. However, more research is needed to test these course effects with greater rigor, pinpoint curricular and pedagogical approaches responsible for course effects, and examine differential benefits of these courses for different student groups. The number of learning frameworks courses and FYS run each semester far exceeds the number of research studies conducted on them, and this presents a major gap, not just in the research literature, but for further developing these courses in practice. Therefore, practitioners should elicit the help of researchers to investigate the effects of their courses to fine-tune their approaches and inform the field at large.

We expect the evolution of how-to-study courses to continue. The most exciting new horizon is the collaboration of researchers in cognitive psychology, neuroscience, educational psychology, student development, and other related disciplines as we continue to investigate research-based practices to support students' success. Breakthroughs in how technology affects learning is also being studied with great implications for how we can best support students' success. For those new to the field, or those that have years of experience teaching or coordinating how-to-study courses, this resource provides an historical perspective to assist with providing support for future teaching, research, and faculty and staff training.

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