

JOURNAL OF COLLEGE ACADEMIC SUPPORT PROGRAMS



IN MEMORIAM

A Tribute to Linda Thompson

SPECIAL CONTRIBUTION

An Abbreviated History of College Academic Support Programs

FEATURED ARTICLES

Supporting Online Community College Students With Trained Tutors in a Post-COVID World

Fully Scaling Up Corequisite Models in Math: Challenges and Successes

PROMISING PRACTICES

The Theoretical Alignment of Supplemental Instruction and Developmental Education: When an SI Leader Uses Adult Learning Theory to Underpin Instruction

Implicit Learning in the Developmental English Classroom: Reducing Anxiety and Improving Student Success

Exploring Culture, Acknowledging Stereotypes

CELEBRATING
40 YEARS
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Also in this issue:

J-CASP CONVERSATIONS

An Interview with Carol Dochen, Co-Founder of CASP

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FOREWORD

Happy 40th Anniversary to College Academic Success Programs (CASP). Our CASP conference is a model "joint" conference co-sponsored by the Texas state chapters of the College Reading and Learning Association and the National Organization for Student Success. Undeniably, our annual conference has surpassed all expectations as Texas developmental educators and learning support specialists have experienced outstanding professional development opportunities throughout the past 4 decades.

Many of our readers will be surprised to learn that our conference name changed over the years. While our leadership tinkered with our name, they were also impressively extending membership benefits, which now include newsletters, a statewide listserv (casp-forum@groups.txstate.edu), webinars, CASP Conversations (regularly scheduled Zoom meetings), social media outreach, the CASP website (https://casp-tx.com), the new CASP website forum, and of course, the Journal of College Academic Success Programs (J-CASP).

In celebration, this issue features an interview with CASP co-founder Carol Dochen. Dochen is CASP's long-time historian, TADE past president (1982–1984), and director of Texas State University's Student Learning Assistance Center (1987–present). The interview, conducted by Jonathan Lollar (assistant editor) and Camrie Pipper (editorial assistant), allows our readers to travel back in time as Dochen parallels her career with the growth of our field from the 1970s through the present. Readers are also treated to Dochen's short article, "An Abbreviated History of College Academic Support Programs," which documents the early history leading up to CASP.

Just as CASP has been a catalyst for innovation and change, so are the articles presented in this issue. Our first juried research article, co-authored by Mark Manasse and Carolina Rostworowski, focuses on how a California community college tutoring program adjusted and augmented its training practices to meet the needs of students confronted with fully online learning. In a second juried research report, Laurie Sharp, using institutional data from Tarleton State University, reports on the outcomes of a robust expansion of its math corequisite program.

Authors of this issue's non-juried promising practice articles reflect on three instructional approaches to promote students' success. Katy Glass and her co-authors recommend the use of adult learning theory to underpin supplemental instruction; Jo Ward promotes the use of implicit learning for students enrolled in developmental English, and Keith Vyvial advocates for ways to help developmental writing students explore culture and acknowledge stereotypes to increase self-efficacy.

We also include in this issue our heartfelt condolences to the family, friends, and colleagues of Linda Thompson. The contributions that she made to our profession are immeasurable. Please make time to read her beautiful In Memoriam written by Karen Patty-Graham.

Denise Guckert, EdD, *J-CASP* Co-Editor Russ Hodges, EdD, *J-CASP* Co-Editor

Welcome from the Presidents of TxCRLA and TX-NOSS

Welcome, *J-CASP* readers, to a very special edition of the journal that celebrates the 40th anniversary of the College Academic Support Programs (CASP) collaboration. As we reflect back on the accomplishments and contributions of CASP to the field of developmental education and student success, we are so grateful for the cooperation and collaboration that brought CASP into being. The CASP Board is comprised of board members from the Texas chapters of two national student academic support organizations: College Reading and Learning Association and National Organization for Student Success. We ask *J-CASP* readers to thank the efforts of CASP Board Members throughout the past 40 years. CASP Board members are a group of talented and devoted volunteers who work together throughout the year to create the space for educators to collaborate, learn, and support each other to make a difference for the students served in Developmental Education and Student Success.

In addition to our annual CASP conference, the CASP Board also supports additional opportunities for professional development, including partial sponsorship of *J-CASP. J-CASP* is funded, supported, and endorsed by the TxCRLA, TX-NOSS, and the Developmental Education Graduate Program at Texas State University. *J-CASP* is published twice a year and is open access and available to readers at no cost. We are especially appreciative to the researchers and practitioners who have contributed to this issue and the entire editorial staff.

We urge *J-CASP* readers, if you have not done so already, to support CASP by joining its collaborating organizations (TxCRLA and TX-NOSS). Simply register for the annual CASP Conference to automatically become a member of both organizations or sign-up directly through our website: (https://casp-tx.com/membership/). We await your experiences, perspectives, and expertise. There is absolutely a seat here for each of you. In the words of M. Scott Peck, author of The Road Less Traveled, "Share our similarities, celebrate our differences."

Happy 40th Anniversary CASP!



Jennifer Baldauf President TxCRLA



Patricia Hernandez President TX-NOSS



PROFESSIONAL DEVELOPMENT OPPORTUNITIES

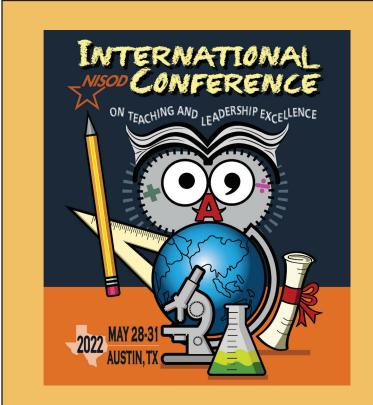
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A Tribute to Linda Thompson



It is with great sadness but with many fond memories that we share that Dr. Linda Thompson passed away on February 2, 2022, at MD Anderson Cancer Center in Houston. Linda has been a colleague and dear friend to many of us throughout her career. She was Professor Emeritus at Harding University, Searcy, Arkansas, where she worked for 32 years and retired in 2017. At Harding, Linda served as professor of Psychology, director and creator of the Program for Academic Success, director and creator of the Learning Center (under a Title III grant), director of TRIO Student Support Services, and director and co-grant writer for the TRIO McNair Scholars Program. Her work with students at all levels of preparation clearly demonstrated her belief in the National Association of Developmental Education (NADE) motto: "Helping underprepared students prepare, prepared students advance, and advanced students excel!"

In addition to her work at Harding, Linda contributed to our profession in several significant ways. She was president of the Arkansas Association for Developmental Education (ArkADE). Her certification as a developmental education specialist at the 1986 Kellogg Institute at Appalachian State University led directly to her founding of academic success services at Harding. Linda returned to Kellogg several times to continue to grow as a professional and to share her educational insights as an informal mentor. She was president of the NADE in 2000–2001 and served on the NADE Certification Council/Accreditation Commission since 2003—as chair since 2008. In addition, she served on several editorial review boards for professional journals, presented numerous workshops, and consulted on program assessment and evaluation. Linda also served as NADE's representative to the Council for the Advancement of Standards in Higher Education (CAS) and co-wrote the revised chapter, "Factors Influencing the Teaching/Learning Process Guide," in the 2009 NADE Self-Evaluation Guides, 2nd Edition: Best Practice in Academic Support Programs. In recognition of her contributions to the field, she was inducted as a Fellow of the Council of Learning Assistance and Developmental Education Associations (CLADEA), and in 2015 she received the Henry Young Award for Outstanding Individual Contribution to NADE. Linda had a special affinity for Texas and CASP. When Linda was NADE president and I was on the NADE Board with her, Texas was engaging in program assessment at the state and institution level; Linda and our certification colleague from Texas, Gladys Shaw, were significant in shaping NADE's assessment support for the Texas initiative.

Linda will surely be remembered for her accomplishments and accolades, but she will also be remembered in our hearts as a wonderful, loving person who was a dear friend to many of us. Linda was a collegial leader who sought consensus on decisions; our meetings may have gone on longer as we often spend time on brainstorming, but creative ideas flowed, and our collaborative decisions were richer due to her leadership style. She was a tireless worker with great attention to detail! Linda and I had regular phone sessions that lasted for hours as we worked through accreditation reviews, presentations, and assorted other projects. She had kind words for everyone and was a thoughtful mentor to students and colleagues. She was a great listener who could pull ideas together from different perspectives in a constructive manner. While she was thinking, she might even break into humming a song in her beautiful soprano voice.

Linda was a gracious woman with an infectious chuckle, a delightful smile, a mischievous twinkle in her eye, and a good heart. Linda lived life to the fullest surrounded by the love and admiration of family, friends, colleagues, and others whose lives she touched along the way. Thank you for enriching our lives. Rest in peace, dear Linda.

Karen Patty-Graham, EdD NADE Past President, CLADEA Fellow, CAS Representative, Certification Council/Accreditation Commission Colleague





















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SPECIAL CONTRIBUTION

An Abbreviated History of College Academic Support Programs (CASP)

Carol W. Dochen, PhD, CASP Historian; TADE Past President, 1982-1984; Director, Student Learning Assistance Center, Texas State University

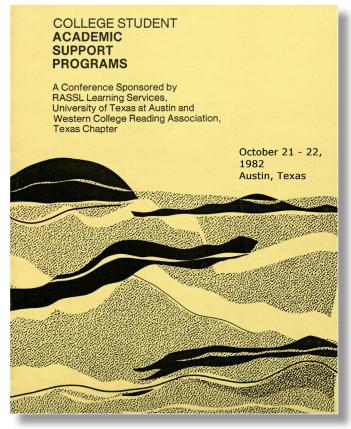
https://doi.org/10.36896/4.2sc1

n 1982, the inaugural CASP conference was held at the former Villa Capri, a motor hotel tucked in between The University of Texas at Austin campus and Interstate I-35. This initial conference was the result of more than 12 years of communication between Coordinating Board staff, faculty, administrators, and legislators in response to the growing numbers of students that needed support attending junior colleges and universities across Texas.

Important events leading up to the formation of the first CASP conference included a national focus on access and the resulting open-door admissions movement in junior and community colleges (and some universities) that gained popularity in the 1960s. Second, conferences were held for faculty and administrators sponsored by the Compensatory Education Project in the Junior College Division at the Texas College and University System Coordinating Board in the early 1970s. Additionally, the expansion of the role and scope of both junior colleges to include state-funded compensatory education courses and of senior colleges to offer a maximum of three hours of state-funded remedial English/reading/writing aided impetus for access-oriented measures (Ashworth, 1979; Compensatory Education Project Advisory Council, 1971).

Changes in statewide policies and course funding proved to be the spark that ignited and launched the developmental education professionalism movement in Texas. In 1982, the Coordinating Board sponsored their *Improving Developmental/Remedial Education* workshop in Austin (Coordinating Board, Texas College and University System, 1982, a), and the National Association for Remedial/Developmental Studies in Postsecondary Education (NARDSPE) held *The First Texas State* NARDSPE *Chapter Meeting and Professional Development Workshop* in Houston. Both conferences provided the much-needed opportunities for college and university developmental education faculty members, learning center staff, and administrators to join the pioneers from the 1970s in conversation and planning for a statewide conference.

Sponsored by the Reading and Study Skills Lab (RASSL) Learning Services at The University of Texas at Austin (now the UT Sanger Learning Center) and Western College Reading Association Texas Chapter (now Texas Chapter College Reading and Learning Association; TxCRLA), CASP was born 4 months later on October 21–22, 1982.



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Compensatory Education Project. (1970). *Transcript of the Conference for faculty and administrators of "basic studies-type" programs.* Coordinating Board, Texas College and University System, Junior College Division.

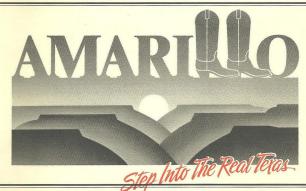
Compensatory Education Project Advisory Council. (1971). Reaching for the ideal: Recommendations for Texas community junior colleges and recommendations for state action. Coordinating Board, Texas College and University System, Junior College Division.

National Association for Remedial/Developmental Studies in Post Secondary Education. (1982, June 24–25). Accountability for the 80's. Conference program for the First Texas State NARDSPE Chapter Meeting and Professional Development Workshop, Houston, TX.

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Dr. Carol W. Dochen, Director, SLAC Texas State University 601 University Drive | San Marcos, TX, 78666 Email: carol@txstate.edu • Conference on Academic Support Programs • Tenth Annual Conference

Differences, Ethics, and
Academic Support:
From Awareness to Practice

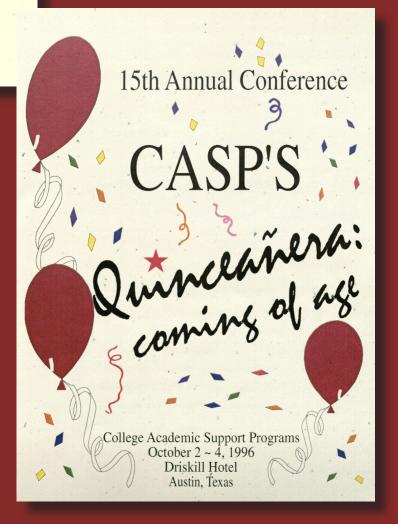


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FEATURE ARTICLE

Supporting Online Community College Students With Trained Tutors in a Post-COVID World

Mark Manasse, Department of Learning Resources and Academic Support, San Diego Mesa College Carolina Rostworowski, Department of Learning Resources and Academic Support, San Diego Mesa College

https://doi.org/10.36896/4.2fa1

ABSTRACT

COVID-19 created unplanned, fully remote educational spaces. One California community college tutor training program augmented their tutor training practices to pivot to meet the needs of students now confronted with fully online learning. Using a mixed-methodology approach (e.g., survey and focus groups/individual interviews) over the course of one year, this program attempted to identify successes and potential gaps in providing equitable online tutoring access and to investigate possible challenges in meeting student affective needs within new, fully online tutoring spaces. Findings indicated clear gaps in student knowledge about online tutoring services, a high level of affective satisfaction with online tutoring, and a demographic mismatch between the proportion of student groups who utilized tutoring services as compared to the proportion who responded to the survey. Ultimately, it was found that tutor training programs need to continue to update training practices to meet the needs of students in a post-COVID world.

Keywords: tutoring, online, training, knowledge, affect

alifornia Community Colleges are a collection of 116 higher education institutions enroll-✓ ing over 2 million students, making them the largest higher educational system and the largest provider of workforce training in the United States (California Community College Chancellor's Office [CCCCO], n.d.-b). Importantly, students who can successfully complete a degree or certificate within this system can double their earnings within 3 years and make higher annual salaries (CCCCO, n.d.-b). However, according to the California Community College Statewide Student Success Scorecard (CCCCO, n.d.-c), only 48.9% of degree, certificate, and/or transfer-seeking students starting for the first time in 2012–13 completed a degree, certificate, or transfer-related outcome within 6 years. In response to these success rates, over the past decade, numerous community college student support systems have scaled to meet the needs of a diverse student population, including building systems around professional development for community college faculty and staff (CCCCO, n.d.-a).

The focus on professional development is indeed a crucial step to meet the needs of a diverse student population. Teaching experience and teacher training are not requirements for faculty teaching in California community college classrooms; rather, a master's degree or a higher degree in a field is the minimum requirement (Russell,

2012). Consequently, without professional development, some instructors may be underprepared to handle the intricacies of appropriately assisting community college students because the instructors' graduate programs do not often focus on andragogy, and community colleges leave little room "in curriculum [to] consider the difficulties young people might have as they learn to think like a political scientist or physicist or the reading and writing difficulties that can emerge when encountering a discipline for the first time" (Rose, 2012, p. 157). Therefore, community college instructors are often discipline—not andragogical experts and may become frustrated with not yet knowing how to best support the very students they are trying to teach (Manasse, 2017). In fact, due to the inconsistent preparation of some faculty to equitably assist a wide array of diverse community college students, it becomes paramount to also support the professional development of learning assistance professionals as well. In other words, at all academic levels, well-trained tutors who provide individualized and customized

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Dr. Mark Manasse, San Diego Mesa College 7250 Mesa College Dr. | San Diego, CA 92111 Email: mmanasse@sdccd.edu student support help to fill in potential learning gaps and improve student success rates (Almassy & Jun, 2020; Kraft & Falken, 2021).

Tutor Training at Our Institution

Supporting the individual and diverse needs of students has become even more important recently as educational researchers have found that the switch to fully online educational spaces created by COVID-19 has impacted students' abilities to focus, led to increased rates of anxiety and depression, and is connected to students of all ages performing worse academically since the transition to remote learning (Hazard, 2021).

Before COVID-19, tutors at our institution were trained to develop both student and their own cognitive and affective learning domains and were also trained to self-develop as educators in four-key areas: tutoring, leadership, andragogy, and equity (Manasse, 2019; Schoenbach et al., 2012). This charge to interact with students as whole people—tending to both their thoughts and their feelings—and to personally develop as educational professionals has helped this program decrease equity gaps and dramatically support student success over a 3-year trend (Almassy & Jun, 2020).

Once fully remote educational spaces were mandated due to the COVID-19 pandemic, we decided to update our tutor training to tap into our tutors' lived experiences of learning and tutoring online to help us transform our ongoing and recurring training processes. This included training on how to tutor online, how to normalize the frustration that might come along with learning in a fully online environment, how to deal with technology issues, how to promote the appropriate services for students who may feel isolated/alone/apprehensive due to the pandemic, and how to humanize our online tutoring spaces to replicate the community feel from our in-person tutoring spaces. Our program subsequently became certified in online tutor training by the Association of Colleges for Tutoring & Learning Assistance (ACTLA) to complement our College Reading and Learning Association (CRLA) Level 3 in-person tutor training (ACTLA, n.d.; CRLA, n.d.). However, we did not know if these changes to our tutor training had positively impacted students' perceptions of tutoring. In sum, we wanted to investigate if the updates we incorporated into our online tutor training had worked or not.

Therefore, when our tutoring program—along with the rest of the world—was relegated to remote instruction, we decided to reflect upon and investigate how well student cognitive and affective needs were being met not only on campus but also online. This study investigated how one tutoring program within the California Community

College system pivoted to meet student cognitive and affective needs in online learning assistance spaces and investigated how we could continue to improve to equitably meet the needs of individual students and student groups in a fully remote environment as well. Consequently, to unveil student perceptions, we created two research questions:

- 1. How well did our fully online tutoring program meet the needs of our institution's students?
- 2. What gaps remained with our fully online tutoring program to equitably meet the needs of students?

Background and Review of Relevant Literature

Technology and the use of the internet have become an integral part of the college experience for decades. Daily, students use computers, tablets, and smartphones to type papers, submit work, email instructors, participate in online classes and meetings, conduct research, and practice content. This reality has become even more highlighted with the global COVID-19 pandemic, when most college classes and learning resources have been designated to fully online platforms, deepening gaps, challenges, and disparities between the demands of the educational system and the educational reality of thousands of students (Ed Trust-West, 2020). In fact, 15% of the students nationwide did not have access to the technology they needed to continue pursuing their education online when the pandemic started, 45% of the college students in California were not keeping up academically, and 31% reported having limited or no access to the academic resources normally available on campus (Ed Trust-West, 2020). Sadly, this is not a new finding. For years, traditionally underrepresented groups of community college students have experienced technological inequity, which has only been exacerbated by the global pandemic (Cullinan et al., 2021). Consequently, the move to fully online instruction due to COVID-19 highlighted that successfully passing a class, completing degrees and certificates, and ultimately acquiring/advancing in a job had become a technological arms race with students beginning at different starting lines but expected to finish the same race at the same time. Combine this technological inequity with the fact that faculty sometimes lack the andragogical preparation to support the academic development of a diverse student population in the ways of how to learn, not just what to learn (Manasse, 2017), and it then becomes no surprise that students sometimes need additional, individualized support not only on what to learn and how to learn but also how to learn online. And this is where tutoring and how to appropriately train tutors to individually

support students no matter the learning modality come into play.

The Need for Tutor Training

The Council of Learning Assistance and Developmental Education (CLADEA) policy has attempted to bring multiple higher education tutoring organizations together with a vision to "provide leadership and a unified voice to advance the profession of postsecondary learning assistance and developmental education" (CLADEA, n.d.-a, Mission section) and in its policy statement, emphasizes the issue of educational inequities for "marginalized student populations" (CLADEA, n.d.-b, Bullet 5). Ultimately, CLADEA suggested that properly-funded learning assistance centers combined with efficacious learning assistance methodology

will improve access to higher education for all students (CLADEA, n.d.-b). Further, a meta-analysis of the field of learning assistance has found that while access to learning assistance can support student success, appropriately trained tutors further strengthen student outcomes:

[There are] moderate to large effects [on student outcomes] when tutors work with a strong program structure that provides high-quality instructional materials and ongoing training...[and] there is also ample causal evidence that college students can tutor effectively, particularly when following highly structured curricula. (Kraft & Falken, 2021, p. 5)

Additionally, Kraft and Falken (2021) discussed that among other aspects, successfully scaled tutoring programs should provide intensive and ongoing training:

Tutors/Mentors Receive Intensive, Ongoing Training: Prioritizing tutor training through a combination of initial professional development, peer learning communities, and on-the-job coaching is key to supporting continual improvement. Investments in training will be increasingly important as programs work to scale their supply of tutors/mentors. (p. 8)

Consequently, tutors who are trained to acknowledge and expect varied and idiosyncratic student needs—in other words, that students will potentially have different educational, societal, economical, and/or technological backgrounds

than their own—will be better prepared to support the academic needs of students on a one-to-one basis. And while there are, of course, a wide variety of variables that influence and lead to successful tutoring sessions—including the tutor and tutee backgrounds—how students feel about educators and educational settings can impact their ability to learn and feel accepted or that they simply belong within educational spaces (Pacansky-Brock et al., 2020; Rose 2012; Schoenbach et al., 2012; Weigle, 2004). This is especially important to keep in mind for remote learning where "descriptive studies of online programs suggest that relationships are a particularly critical feature for maintaining engagement and that lack of internet and internet-enabled devices can lead to unequal access" (Kraft & Falken, 2021, p. 5).

Once fully remote educational spaces were mandated due to the COVID-19 pandemic, we decided to update our tutor training to tap into our tutors' lived experiences of learning and tutoring online to help us transform our ongoing and recurring training processes.

Theoretical Framework: Community of Inquiry and Building Relationships with Students

Well-trained educators, then, need to become experts at individually and humanistically supporting the whole person both in person and online, not solely supporting knowledge acquisition, which typically is the focus of classroom time and classroom assessment (Pacansky-Brock al., et Schoenbach et al., 2012). In fact, fully remote learning—like that necessitated from COVID-19 quarantines—should also focus on the development of positive relationships in order to humanize online education since these spaces have the potential to be isolating and lead to student depression and anxiety (Hazard, 2021; Packansky-Brock, 2020). Consequently, positive, educational relationships become

the "connective tissue between students, engagement, and rigor" (Pacansky-Brock et al., 2020, p. 2).

To be clear, fully remote teaching environments that were necessitated by COVID-19 quarantines led to the realization that all educators need continued and ongoing professional learning opportunities to appropriately support the diverse needs of whole students, including their cognitive and affective domains (Schoenbach et al., 2012), both in person and online. Therefore, as we now continue to improve what the professional development of educators might look like in our post-COVID world, we should also continue to develop tutor training to better support students in all possible educational spaces, including online.

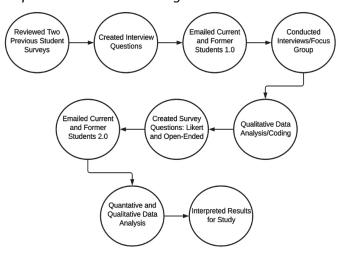
The community of inquiry (COI) framework considers the affective and cognitive dimensions of learning in online spaces and expands them to include three interconnected domains of presence: cognitive, social, and teaching (Garrison et al., 1999). COI, then, creates a clear paradigm of the potential issues fully online instruction creates for students. Specifically, the second core element of this theoretical framework, social presence, has potentially been impacted by fully remote learning environments, and students may be experiencing a lack of joy or inability to find these online interactions personally fulfilling. This concept is of paramount importance as "social presence is a direct contributor to the success of the educational experience" (Garrison et al., 1999, p. 4). Additionally, according to this framework, since any participant in the educational setting may take on the role of the teacher, well-trained tutors are in an ideal position to take on the primary roles of both designer and facilitator of ideal online experiences that welcome the necessary cognitive and social work needed to be successful in remote educational settings. In sum, the role of the well-trained tutor in this framework is to "support and enhance social and cognitive presence for the purpose of realizing educational outcomes" (Garrison et al., p. 5). Therefore, when cognitive, social, and teaching aspects work in unison in remote environments, students may feel that they can bring their true selves to educational spaces, leading to improved online interactions and subsequent student success (Garrison et al., 1999; Hazard, 2021; Pacansky-Brock et al., 2020; Schoenbach et al., 2012). Well-trained tutors, then, who have been trained in theories connected to student affective and cognitive needs, are integral to online student success.

Methodology

In order to answer our two research questions, we chose a mixed-method approach using quantitative (survey) and qualitative (focus groups/interviews and survey questions) following guidance from ended Creswell and Plano Clark (2011) and Patton (2002). These authors recommended conducting comprehensive and integrated explorations of the data to ensure a holistic framework for the data analysis. By doing so, this methodology provided a way for us to explore the experiences of the respondents through their own lens, as well as to help us understand possible inconsistencies and elucidate ambiguities. We also chose this multi-phased participatory approach to provide students/respondents with a platform to share their experiences and perceptions to identify potential gaps in providing online, equitable tutoring access and tutoring services to students at our institution. Using the information from the participants regarding the identified gaps, we then were able to assess how well our fully online tutoring program met the needs of students. Furthermore, the sequential design supported the analysis of quantitative data through the stories and narratives shared by the respondents.

Once we reviewed the literature and selected a theoretical framework and research methodology, we designed the study. Our methodology consisted of (a) using student feedback from two prior student services and tutoring surveys to create the focus group interview questions, (b) emailing current and former students to volunteer for the study, (c) conducting focus groups and individual interviews with students who volunteered for the study to collect their perceptions on their in-person and online tutoring experiences, (d) designing and administering a survey to collect student perceptions on their in-person and online tutoring experiences. Figure 1 illustrates the sequential process we used in our research design.

Figure 1
Sequential Research Design



Instrument Development for Focus Groups and Survey

To develop our study's instruments, we analyzed two sources of student feedback from two previous surveys, one administered by our institution: Student Support Services Survey (see Appendix A), and one administered by our tutoring program: Post-Tutoring Session Feedback Survey (See Appendix B). The Student Support Services Survey was initiated by our campus and included six closed questions and one open-ended question. This survey was emailed to approximately 3,000 students who were actively enrolled in Spring 2020 or who had previously attended the institution but who were not enrolled at the time of the survey. A total of 309 students responded to the survey. Some salient points from this survey

that emerged included the fact that respondents said the most helpful training for them at the time of the survey would have been Canvas and Zoom; tutoring was regarded as the most helpful service to students entering the Fall 2020 semester; and information that could have helped them the most was information on how to take online courses.

Also, before and throughout our study, our tutoring program implemented a *Post-Tutoring Session Feedback Survey* (See Appendix B). In sum, these questions asked the student to reflect upon and rate a specific, recent tutoring session as well as the technology utilized during that ses-

sion to support their learning. In the past year alone, these post-session surveys have been sent to over 2,000 students, and we have received over 650 responses. Some salient points from this survey that have emerged included positive feedback on the technology utilized to conduct online tutoring and a continual positive increase in student perception of online tutoring services.

After reviewing data from both surveys and updating our own online training practices, we then developed the instruments for our mixed-method approach. Patton (2002) described the mixed-methods approach for data collection as a means to get insight into the different perspectives of the questions(s) being investigated. This is possible through the implementation of different sources of data collection, in this case, both quali-

tative and quantitative. According to Patton, data collected from quantitative approaches allows for the researcher(s) to "measure the reactions of a great many people through a limited set of questions" (p. 14), whereas qualitative methods "produce a wealth of detailed information about a much smaller number of people and cases" (p. 14). Furthermore, Patton states that the mixed-method approach relies on data collected through two distinct instruments: surveys and other similar tools for quantitative data, and the researchers themselves for qualitative data, both of which have been implemented in this research study.

Focus Group: Participants, Data Collection

The purpose of the focus group was to give participants the opportunity to share their experiences and thoughts about our tutoring services in smaller groups or individually. This

format allowed for the researchers to ask open-ended questions to elicit the individual experiences of the participants and their viewpoints as well as expand and clarify with follow-up questions. The groups were created randomly, and participants were given a few options for meeting days and times and signed up according to their preferences.

We sent an email to approximately 3,500 students who had utilized our tutoring services before (some, but not all of these emails were the same emails from the *Student Support Services Survey*, and all of these emails were included in our *Post-Tutoring Session Feedback Survey*) with

an invitation to participate in a tutoring focus group on a voluntary basis with an opportunity drawing to receive a gift card upon completion of the focus group sessions (see Appendix C).

Of the approximately 15 who volunteered students participate, student follow-through resulted in five participants being asked about their overall experiences with both in-person and online tutoring services offered by our program. Also, due to scheduling issues, the focus groups became a small group (one session) and individual interviews (three sessions). Participants included four females and one male. We did not ask the students about their ethnic backgrounds. Three participants started using our tutoring services in Fall 2019, one in Spring 2020, and one in Summer 2020. These

semi-structured interviews (Patton,

2002) were conducted in the Fall of 2020 over the course of three weeks, and all lasted about one hour. The participants were asked about their experiences interacting with staff members and tutors, how welcome and safe they felt both in the in-person and online tutoring environments, their experiences making appointments and dropping in for tutoring, and how they compared the in-person and online tutoring (see Appendix D).

Data Analysis: Focus Groups, Interviews

The interviews were recorded, transcribed, and analyzed. Themes emerged, followed by further analysis, and finalized themes were categorized and examined for patterns. The researchers utilized a color-coding system to highlight words and create categories of ideas that were relevant and/or recurrent (Patton, 2002).

Survey Instrument

Based upon the focus group analysis in Spring 2021, we then created and disseminated a comprehensive Tutoring Survey with both closedended and open-ended questions that was sent to the same 3,500 student participant emails (see Appendix E). Invitations for students to participate in the survey were also posted on social media, our webpage, and the tutoring Canvas page. The survey consisted of 22 multiple choice questions with Likert-scale responses, several multiplechoice questions, and a few open-ended questions, all of which were directly related to the coded focus-group responses and research questions of this study. Ultimately, this survey also allowed us to examine another, deeper layer of analysis: the extent to which the background of a student/ student group potentially impacted responses to the survey.

A total of 334 survey responses were collected, which yielded both qualitative and quantitative data. Table 1 details demographics of the *Tutoring Survey* respondents.

Table 1 *Tutoring Survey Participant Demographics*

Participant characteristic	Percent of respondents
Age range	
18–24	41.3%
25–29	34.1%
30–39	14.1%
40–49	2.1%
Other	8.4%
Gender	
Male	51.8%
Female	44.0%
Non-Binary/Unreported	4.2%
Ethnicity	
White	58.4%
Black/African American	9.0%
Latinx	8.4%
Asian/Pacific Islander/Filipino	9.6%
Multiple/Unreported	14.6%
Native language	
English	91.1%
Other	8.9%

Findings

The purpose of this study was to identify potential gaps in providing online, equitable tutoring access and tutoring services to students at our institution, as well as uncover possible disparities and challenges in student experiences using our fully online tutoring services that were created by COVID-19 mandates. We initially

augmented our tutor training to better prepare our tutors to support the potential emerging, individual needs of students who were now learning fully online, and then collected quantitative and qualitative data that was then analyzed and interpreted within the period of one year. Thereafter, our study intended to ascertain how well our program and tutor training met the needs of students in online tutoring spaces and what gaps remained in meeting those online needs. We coded our findings into three main themes:

- Knowledge: How knowledgeable respondents were about new online tutoring services.
- Affect: How respondents felt about their online interactions with staff/tutors.
- Demographics: How much the background of a student/student group might impact responses to the survey.

Theme: Knowledge About Tutoring Services

For this study, we were concerned whether students would know how to access our new fully online tutoring services or not. Pre-COVID, we were located in our campus's library and promoted our services via outreach to faculty. With the changes that COVID-19 brought, we did not know whether students or faculty would be able to find our fully remote services. Overall, 334 students responded to our *Tutoring Survey*, 74.6% self-reporting as current students at the college and 25.4% as former students. Data revealed that the vast majority (95.2%) of the study participants were aware of the free online and in-person tutoring services offered, and 80.2% learned about these services through a professor, a counselor, a classmate, a tutor, or the Canvas learning management system.

We created an online tutoring hub both on our website and our Canvas shell. To remove a potential knowledge barrier, we worked with our IT department to make the link to online tutoring services automatically available in student Canvas shells so that instructors would not have to opt in to making the link to tutoring services available. This study did not investigate the percentage of campus instructors who may have made the tutoring link unavailable for any reason. However, 22.1% of the study respondents found the tutoring link in at least one of their Canvas shells without being prompted to look in Canvas for access to our tutoring services, and 92.6% of these respondents clicked on this tutoring link. Interestingly, among the open-ended responses on why some of the respondents did not click on the link included the thought that it might not be a safe link to click and that students simply did not know what the tutoring link was.

Data also revealed that 24.9% of the respondents thought it would be helpful to publicize the tutoring services via social media

(which we were doing), and that 15.3% would like to see a link to tutoring services in their online student portal, which has now been accomplished since this study was conducted. Other ways in which respondents said they would like to have access to the services include a link in their Canvas course shells (20.4%) and reminder emails (18.6%), both of which were already happening but of which respondents were unaware, not receiving, or not checking.

Theme: The Affective Domain – How Students Feel About Tutoring

Our program was interested in discovering if students felt just as welcomed in our online tutoring spaces as they did in our in-person spaces. Thus, the *Tutoring Survey* utilized a Likert scale from 1 to 5 (1 = unsatisfied and 5 = very satisfied). Our findings indicated that there was a slightly overall better affective experience with online tutoring versus in-person tutoring. Table 2 shows a breakdown of the data between respondents' in-person versus online affective experience, combining responses at Likert levels 4 and 5 together.

Table 2Tutoring Survey Spring 2021: Respondents'
Affective Experience Using Tutoring Services

	Tutoring format		
Affective qualities	In-Person	Online	
Satisfaction with staff interaction Satisfied/Very satisfied	83.3%	95.9 %	
Welcome feeling Welcome/Very welcome	78.0%	90.7%	
Comfort feeling Comfortable/Very comfortable	85.4%	92.8%	

Qualitative data that supported these findings from the *Tutoring Survey* include responses to questions such as:

- "Warm service."
- "Great opportunity—please continue."
- "Online tutoring is very professional."
- "I'm so grateful for the free tutoring that I take advantage of to succeed in my educational career."

The findings from the *Tutoring Survey*, which are similar to the *Post-Tutoring Session Feedback Survey*, demonstrated the following over one year (Fall 2020 through Fall 2021) with online tutoring (n = 677 students):

 92% of the students thought it was very easy/easy to make appointments.

- 91.2% of the students thought it was very easy/easy to use Zoom as a tutoring platform.
- 99.2% of the students were very likely/ somewhat likely to use ideas from the tutoring session in the future.
- 96.6% of the students were very satisfied/ satisfied with their online tutoring session.
- 96.1% of the students were very likely/ somewhat likely to use online services again.

Qualitative data from the *Post-Tutoring Session Feedback Survey* that support these findings include statements from students such as:

- "I recommend the online tutoring service to any student that they need help with their homework. Even though the students have another issue, they can talk to tutoring service and they get help. The online tutoring service is reliable and is at no charge."
- "I like online tutoring, and it is easy to get in access."
- "I had a great first-time experience. I feel comfortable using this service."
- "Once I have gotten the hang of the technical side I felt like this saved me so much more time because I didn't have to drive 30 minutes to [campus] then find parking and walk to the tutoring center! I hope this is kept up even after the pandemic because as with everyone else time is precious. I have 3 kids who are at home doing school and so leaving and going on campus even after the pandemic would be hard because now I'm spoiled that tutoring is just a few clicks away! The screen share was super simple!"
- "I really love the 'waiting room.' The music and the guy who was working the receptionist zoom desk that put me in a breakout room with [staff] was a great character and I'd go back just for the ambiance."
- "Honestly, tutoring through technology can be difficult and frustrating at times, however, you guys make it as hassle free as it's going to get which I greatly appreciate. Thank you for offering this fantastic free resource."

We also investigated the preference of tutoring modality to see if this impacted student affect and ultimately found that there was an even divide in preference, with 46.7% preferring online tutoring, 43.4% in-person, and 9.1% having no preference. Therefore, our quantitative and qualitative data revealed that tutor training helped to meet student affective needs regardless of their tutoring modality preference.

Theme: Demographics

A last category that emerged in this research was respondent demographics. Through thematic analysis, the authors discovered that the background of a student/student group might have impacted responses to this survey. Tables 3 through 6 provide a breakdown of the respondents' self-identified demographic information in comparison with the overall student population at the college and demographics of students who utilized the tutoring program:

Table 3Age Group: College-Level Data, Tutoring Program Users, and Tutoring Survey Respondents

	Age ranges				
Survey instrument	18–24	25–29	30–39	40–49	Other
College Fall 2020 ^a	55.0%	16.0%	12.0%	4.0%	13.0%
Tutoring program Fall 2020 ^b	58.1%	14.5%	12.8%	5.4%	9.2%
Tutoring survey respondents Spring 2021	41.3%	34.1%	14.1%	2.1%	8.4%

^a San Diego Community College – Office of Institutional Effectiveness and Research (2021a). ^b San Diego Mesa College (2021a).

Table 4Gender: College-Level Data, Tutoring Program Users, and Tutoring Survey Respondents

	Self-Reported gender		
Survey instrument	Male	Female	Non-Binary/ Other
College Fall 2020 ^a	43.0%	57.0%	_
Tutoring program Fall 2020b	38.1%	61.6%	0.6%
Tutoring survey respondents Spring 2021	51.8%	44.0%	4.2%

San Diego Community College – Office of Institutional Effectiveness and Research (2021c).
 San Diego Mesa College (2021c).

Table 5Ethnicity: College-Level Data. Tutorina Program Users. and Tutorina Survey Respondents

Ethnicity: College-Level Data, Tutoring Program Osers, and Tutoring Survey Respondents					
	Self-Identified ethnicity				
Survey instrument	White	Black/African American	Latinx	Asian/Pacific Islander/Filipino	Multiple/Unreported
College Fall 2020 ^a	30.0%	6.0%	39.0%	15.0%	10.0%
Tutoring program Fall 2020 ^b	28.3%	7.4%	38.9%	17.3%	8.1%
Tutoring survey respondents Spring 2021	58.4%	9.0%	8.4%	7.2%	17.0%

^a San Diego Community College – Office of Institutional Effectiveness and Research (2021b).

Table 6Language: College-Level Data, Tutoring Program Users, and Tutoring Survey Respondents

Curvou instrument	Native language		
Survey instrument	English	Not English	
College Fall 2020	N/A	N/A	
Tutoring program Fall 2020	N/A	N/A	
Tutoring survey respondents Spring 2021	91.1%	8.9%	

Responses included in Tables 3, 4, 5, and 6 revealed differences among the demographics of the Tutoring Survey respondents, the college student population, and students who utilize the tutoring program. For example, when compared to the college-level data and tutoring program data, there seemed to be a disproportionately higher level of *Tutoring Survey* respondents in the white (Table 5) and 25-29 age group (Table 3). Additionally, there seemed to be a higher level of female students who utilized remote tutoring the past year as compared to the school demographics and Tutoring Survey respondents (Table 4). Further analysis with inferential statistics would shed more light on the significance of these disproportionate percentages. Lastly, via the Tutoring Survey, we were able to ascertain language background information of survey respondents (Table 6). However, we were unable to report the overall language background of students who utilized tutoring or attended the college.

Overall, we needed to be cautious about how we interpreted the knowledge and affect results as it appeared that the proportion of the survey respondents does not consistently closely align with the student population of the institution as a whole and/or the proportion of the students who utilized the tutoring. However, with the amount and type of data that we have now gathered, we can follow up with additional focus groups within specific populations, especially when the feedback received did not fully represent the students

^b San Diego Mesa College (2021b).

we serve, such as Latinx students, students from specific age groups, and students who may be nonnative speakers of English.

Discussion

COVID-19 created completely remote learning spaces for students, and some faculty and students were not prepared to deal with this transition due to a lack of the necessary technology needed to thrive online and/or the training to appropriately teach/learn online. Additionally, COVID-19 has had affective impacts on students, and the educational world has seen an increase in student depression and anxiety (Hazard, 2021). To combat these issues, our tutoring program created online tutor training opportunities to better prepare our tutors to support the individualized and

emerging needs of students created by remote learning. To investigate the impact of this online tutor training on student perceptions, we created two research questions:

- 1. How well did our fully online tutoring program pivot to meet the needs of our institution's students?
- 2. What gaps remained with our fully online tutoring program to equitably meet the needs of students?

Pivoting: How Our Tutoring Program Met Student Need

As researchers, it was amazing to see that the work we put into training our tutors to support the whole student, especially in our online spaces, apparently made a difference. When we first moved to online tutoring in March 2020, we initially provided tutors with individual Zoom links. After a few

months, our tutors reported that they and students felt the very sense of isolation and depression noted by Hazard (2021). Listening to the feedback of students and tutors, we not only provided specific training sessions around humanizing technology, we also recreated communal spaces by removing individual zoom links and creating virtual online tutoring centers where multiple students, tutors, faculty, and staff could interact with one another in real-time.

No matter the work we put into training our tutors, it was still surprising to see that students self-reported such a high satisfaction within our online tutoring spaces and, in fact, were more satisfied with our online tutoring spaces than with our in-person spaces. We also learned that by listening to tutors' and students' trepidation

of feeling isolated and alone and then providing tutor training around how to support themselves and others online, we were able to positively support the affective domain of students in our online spaces and even become ACTLA online tutoring certified. Furthermore, we continue to see an increase in the success rates of students who utilize our tutoring services during COVID, just as we did pre-COVID (Almassy & Jun, 2020).

Gaps: How Our Program Can Continue to Improve

Clearly, there was a gap between what we believed students knew about our tutoring services and what they actually knew. For example, students requested access to tutoring information in their Canvas shells, via email, and via social media, all of which were in place while this study

was being conducted. On the one hand, this demonstrated that our program and training successfully anticipated where students might search for tutoring services; on the other hand, we discovered the need to continue to improve how we consistently market that these access points exist, especially when students see a link to tutoring, for example, but are apprehensive to click on said link. This may stem from a technological divide experienced by some students, and we should not make assumptions about what students do or do not know about access to online tutoring.

Also, students mentioned they would like to see a link to tutoring in their district portal. Luckily, we were working on this and have now established this access point for students, again demonstrating that via ongoing conversations with students and

tutors, our program does well in learning about and meeting student needs. It is important to keep in mind that even when we provide access points that students prefer, like social media, we may need to do a better job at consistently being active in such spaces. For example, we now have a staff member who is assigned to post about tutoring in our social media spaces more often, and we can supplement this activity with improved training about how tutors can promote and even participate in social media with students.

Next Steps in Research: Student Backgrounds and Tutoring Perceptions

There is a fairly large divide between the number of Latinx students at our institution, the proportion of Latinx students who utilize

tutoring services, and then the low proportion of Latinx students who responded to this survey. This is one of many examples we discovered from analyzing the demographic breakdown of our study participants, campus demographic breakdown, and tutoring program demographic breakdown. In future studies, we plan to specifically reach out to our Latinx community, for example, to ensure they are well represented in any findings. We also noticed that survey respondents ages 25-29 may have been overly represented in the survey results compared to the proportion of students in this age range at our institution and in our tutoring services. Again, we need to be mindful about how we ask for responses from across age groups and work with our campus services to ensure more consistent feedback. We also noticed gender discrepancies

among college-level data, tutoring program utilization, and Tutoring Survey respondents. Follow-up questions could be asked in future studies about why individuals choose to utilize online learning assistance or not, as the gender data from the past year of tutoring program utilization is incongruent with previous years (Almassy & Jun, 2020). Lastly, we need to know more about the language background of our students and how this might impact student success across the curriculum. For example, in our tutoring program, we certify tutors in English as a Second Language tutoring across the curriculum and are currently developing ways to create multilingual tutoring sessions to support the diverse needs of our students. In other words, we have a sense that many of the students at our institution and within our program have diverse linguistic backgrounds, but we need

more information about how many students that is. Overall, we want to ensure we are fully investigating whether all student groups feel positive about their ability to access and utilize tutoring in our online spaces.

Conducting this type of research while still in the midst of the pandemic was quite eyeopening. We were able to get some feedback on areas we were doing well in our online spaces, and some gaps we still need to fill. Our program was extremely deliberate with training our tutors to become even more welcoming, accommodating, and understanding in our online tutoring spaces. It appears as we move into more and more of a hybrid educational world, we will need to continue to support and develop our tutors as hybrid tutors to equitably support students.

Limitations

Lastly, we

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and how this

might impact

student success

across the

curriculum.

Although the researchers for this study created a thorough, year-long, and meticulous approach to gathering and analyzing data, no matter the care the researchers took in creating this study, it should be kept in mind that there are still several limitations. First, this is the review and analysis of students who utilized one program in one community college setting; consequently, it may be considered challenging to generalize findings. Additionally, both researchers' positionality needs to be kept in mind. In this particular study, both researchers are highly involved in the field of learning assistance and education, and these backgrounds impact how we conduct and evaluate educational research.

In addition, the limits of the participants

It should be noted that our *Tutoring Survey* was conducted during a time when we only had online tutoring available and that some of the respondents did not ever utilize our in-person services.

Although this study was open to all students—even those who did not utilize our tutoring services—it should be kept in mind that many of the students in this study utilized tutoring. Another limitation was that the overall utilization of our tutoring services decreased during COVID.

Lastly, there were some technological and implementation gaps that may have influenced survey results. We conducted focus groups during the COVID-19 pandemic. Consequently, we were relying upon Zoom for our focus group sessions. Students who participated in live Zoom focus groups did sometimes have technological issues and missed portions of sessions. Additionally, we utilized Google Forms to anonymously survey students. It is possible that some students responded to the survey more than one time since

we did offer an opportunity drawing of a gift card to participate. We also posted this survey on our social media, so it is also possible that someone who was not a student at our institution responded to the survey. Although the researchers did their due diligence to review, analyze, and clean clear outliers, it should be noted that some of our raw data may have duplicative or out-of-group responses.

Conclusion

The past few years, remote learning stemming from COVID-19 isolation has clarified that only providing training and access to in-person services is no longer appropriate in the field of education. We will need to continue to provide space to support our students both in person and online. Luckily, we have already developed the training necessary to support students in one modality or another, but there is potentially a gap to support tutors on how to work across systems simultaneously—moving from an in-person tutor, to an online tutor, to a hybrid tutor—who works both in person and online. Indeed, the more we ask of students—like the need to take classes in a hybrid modality—the more we need to prepare our educational spaces and teams to be trained to support these students.

We can see that our training does well to anticipate student needs in multiple areas (i.e., knowledge and affective domains), but there are still gaps in how we support the 2022 version of the whole student who will no longer reside in a single modality as an in-person or as an online student. If our students need to become more capable of becoming hybrid students, our training and services need to follow suit. In future studies, we will need to define what hybrid learning assistance sessions might look like, implement updated practices, and then reassess how to support tutors and students via an updated mixed-methodology approach to discover: (a) how students feel about the continued professional training of tutors. (b) what students' course-level outcomes look like in emerging hybrid learning spaces, and (c) how to ensure we get a broader range of demographics from survey respondents that better represent our institution and our tutoring program.

We know we want to continue to meet students as whole people, humanistically, and provide students the integrated technology pieces they desire: more ways to access our services, improved social media, time management options, and continued humanized services. Therefore, it seems like a successful higher education tutoring program in 2022 is still in process, and that's just the way it should be: focusing on the journey and not only the result.

Disclosure Statement

No potential conflict of interest was reported by the authors.

About the Authors

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Appendix A Student Support Services Survey

- To be a successful student in Fall 2020 online/remote learning, training in which of the following would be most helpful? Rank top three.
 - a. Canvas
 - b. Zoom
 - c. My Portal
 - d. Student Conduct and Policies
 - e. Information on Technology Lending Program (Laptops/WiFi/Webcams, etc.)
 - f. Other Specify Below
- 2. To be a successful student in Fall 2020 online/ remote learning, which services would be most helpful for students? Rank top three.
 - a. Tutoring
 - b. Academic Counseling
 - c. Personal Counseling
 - d. Career Counseling
 - e. Support Services (DSPS/EOPS, etc.)
 - f. Other Specific Below
- To be a successful student in Fall 2020 online/ remote learning, which of the following resources would be most helpful for students? Rank top three.
 - a. Information on how to take online/remote classes
 - b. Information on The Stand (Food Pantry)
 - c. Information on Time Management
 - d. Information on Childcare
 - e. Advice from students and faculty about online learning
 - f. Other Specific Below
- 4. In what manner is it easiest for you to learn about the various services, resources, and trainings [the Institution] offers? Rank top three.
 - a. Training videos on a dedicated webpage
 - b. Peer assistance and one-on-one online training
 - c. Small group online trainings
 - d. Modules and information delivered through Canvas

- 5. If we created a webpage with resources intended to help students be successful in online/remote learning in Fall 2020, what would you want included and easily accessible on the website? Rank top three.
 - a. Technology Training Videos (Canvas, Zoom, etc.)
 - b. Tutoring
 - c. Counseling (Academic and Career)
 - d. The Stand (Food Pantry)
 - e. Technology Lending Program
 - f. Student Health Services
 - g. Other Specific Below
- 6. What do you know now that you wish you knew then about being an online student? Please feel free to comment on things like how long you spend on your classes, how important counseling/tutoring/faculty office hours are, advice for new online/remote learners, etc.
- 7. What days/hours is it most important for you to have access to a "live" person for help (general questions/tutoring/counseling, etc.)? Rank top three.
 - a. Weekday mornings (8am-12pm)
 - b. Weekday afternoons (12pm-4pm)
 - c. Weekday evenings (5pm-8pm)
 - d. Weekend mornings (8am-12pm)
 - e. Weekend afternoons (12pm-4pm)
 - f. Weekend evenings (5pm-8pm)

Appendix B Post-Tutoring Session Feedback Survey

1. How would you rate the process for making an online tutoring appointment?

1	2	3	4	5
Very difficult process	Difficult process	Neither difficult nor easy process	Easy process	Very easy Process

2. How would you rate Zoom as a tutoring platform?

1	2	3	4	5
Very hard to use	Hard to use	Neither hard nor easy to use	Easy to use	Very easy to use

3. How likely are you to use one or more ideas from your tutoring session today in the future?

1	2	3	4	5
Not likely at all	Somewhat unlikely	Neither unlikely nor likely	Somewhat likely	Very easy to use

4.	How satisfied were you with your tutoring session
toc	day?

1 2 3 4 5

Very Unsatisfied Neither Satisfied Very unsatisfied or satisfied or satisfied

5. How likely are you to use our online tutoring services again?

2 5 1 3 4 Not likely Somewhat Neither Somewhat Very easy unlikely unlikely to use at all likely nor likely

- 6. Who did you work with today? Names of tutors available in alphabetical order.
- 7. Comments or suggestions about this tutor (Please be as honest and thorough as possible). Your opinion matters.
- 8. Comments or suggestions about our online tutoring service (Please, be as honest and thorough as possible). Your opinion matters.

Appendix C Invitation to Focus Groups

- 1. Email:
- 2. First Name:
- 3. Last Name:
- 4. CSID:
- 5. How often do you use [our] tutoring services? Times per semester: 1 2 3 4 5 Everyday
- 6. About how long have you been using [our] tutoring services?
 - a. Since Summer 2020
 - b. Since Spring 2020
 - c. Since Fall 2019
 - d. Before Fall 2019
- 7. Which tutoring modalities have you used? (Click all that apply.)
 - a. On the Floor Tutoring: Worked with a tutor face-to-face inside of the tutoring center or in a building at [Our Institution]
 - b. Embedded Tutoring: Worked with a tutor who was in my classroom
 - c. Online Tutoring: With [program] tutors in Spring and/or Summer 2020
 - d. Online tutoring with NetTutor
 - e. I'm not sure
 - f. Other

- 8. Which tutor services do you use? (Click all that apply.)
 - a. Writing
 - b. Language
 - c. STEM (math, science, non-humanities)
 - d. Music/Fashion
 - e. Allied Health
 - f. I'm not sure
 - g. Other
- 9. When are you available to participate in the focus group? A focus group is when you discuss your opinions on a topic with a small group of other people who have experience with that topic. Please select all the dates/times you are available, but you will only attend ONE session. Not everyone who signs up will necessarily be selected to participate. We will follow up with an email to let you know whether you have been selected or not and what day/time to participate.
 - a. Tuesday, September 1 from 9 AM to 10 AM
 - b. Wednesday, September 2 from 1 PM to 2 PM
 - c. Thursday, September 3 from 4 PM to 5 PM

Appendix D Focus Group Questions

- Tell us about your experience using the MT2C tutoring (in-person and/or online)
 - a. Have you experienced MT2C in-person tutoring, online tutoring or both?
 - b. Have you used tutoring for STEM or humanities?
 - c. Have you dropped in or made an appointment? Or both?
- 2. How were these experiences similar and or different?
 - a. In-person versus online
 - b. STEM versus humanities
 - c. Drop-in versus appointment
- 3. Can you describe a step-by-step from how you found our tutoring services until the end of the tutoring session?
- 4. How did tutoring help you in your academic journey?
- 5. What was easy about using MT2C tutoring? What was challenging?
 - a. Making an appointment
 - b. Finding where to go/how to connect
 - c. Interacting with a staff/tutor
- 6. Any other comments/thoughts you would like to share?

Appendix E Tutoring Survey

- 1. Were you aware that [our institution] offers free tutoring?
 - a. Yes
 - b. No
- 2. To the best of your memory, which of the following ways have you learned about [our] free tutoring services?
 - a. Canvas/[Institution] Website
 - b. Instructor or Counselor
 - c. Student/Classmate/Tutor
 - d. Other [Institution] Services (Journeys, EOPS, DSPS, Pathways, Social Media, etc.)
 - e. Multiple ways listed above Please, specify all the ways you learned about [our] services.
 - f. Unsure
- 3. How can we better advertise our services and resources?
- 4. Free online tutoring has a link in most course Canvas shells. Have you noticed this link?
 - Yes, at least one of my instructors mentioned it
 - b. Yes, I found it myself
 - c. Yes, someone else told me about it, for example another student or a tutor, etc
 - d. Multiple ways listed above
 - e. Unsure
 - f. No
- 5. Have you clicked on the link?
 - a. Yes
 - b. No
 - *If no, can you let us know why you have not clicked on the link in Canvas?
- 6. Have you used [our] free tutoring services?
 - a. No, not yet
 - Yes, I have used [program] in-person tutoring when we were on campus, including working with an embedded tutor (a tutor in my in-person class)
 - Yes, I have used [program] online tutoring, including working with an embedded tutor (a tutor in my online class)
 - Yes, I have used both in-person and online tutoring, including working with an embedded tutor (a tutor in my online and/or in-person class)
- 7. In-person experience: On a scale from 1 to 5, how satisfied were you with your interaction with the staff member at the front desk of the tutoring center?

Not satisfied 1 2 3 4 5 Very satisfied

- 8. In-person experience: On a scale from 1 to 5, how welcomed did you feel to our on-campus tutoring space?
- Not welcome 1 2 3 4 5 Very welcome
- 9. In-person experience: On a scale from 1 to 5, how comfortable did you feel to our on-campus tutoring space?
- Not comfortable 1 2 3 4 5 Very comfortable
- 10. Is there anything else you would like to tell us?
- 11. Online experience: On a scale from 1 to 5, how satisfied were you with your interaction with the staff member moderating the online tutoring room?
- Not satisfied 1 2 3 4 5 Very satisfied
- 12. Online experience: On a scale from 1 to 5, how welcome did you feel to our online tutoring space?
- Not welcome 1 2 3 4 5 Very welcome
- 13. Online experience: On a scale from 1 to 5, how comfortable did you feel with our online tutoring space?
- Not comfortable 1 2 3 4 5 Very comfortable
- 14. Is there anything else you would like to tell us?
- 15. Both in-person and online experience: On a scale from 1 to 5, how satisfied were you with your interaction with the staff members at the reception desk in-person and zoom room in the tutoring center?
- Not satisfied 1 2 3 4 5 Very satisfied
- 16. Both in-person and online experience: How similar were your interactions with staff members between the in-person reception desk and online Zoom room?
- Not similar 1 2 3 4 5 Very similar
- 17. Both in-person and online experience: On a scale from 1 to 5, how welcome did you feel about our in-person and online tutoring spaces?
- Not welcome 1 2 3 4 5 Very welcome
- 18. Both in-person and online experience: On a scale from 1 to 5, how comfortable did you feel while in our in-person and online tutoring spaces?
- Not comfortable 1 2 3 4 5 Very comfortable
- 19. As someone who has used both in-person and online services, you have a lot of knowledge about our program. Can you briefly describe any similarities and/or differences you have noticed between our in-person tutoring services and online tutoring services?

- 20. Where would it be helpful to see a direct link to the free tutoring at [our institution]? Click all that apply. a. Canvas

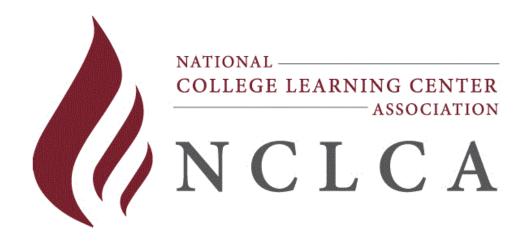
 - Student portal b.
 - c. Reminder emails
 - Social media d.
 - Multiple options above e.
 - f. Other
 - *Please, specify where it would be helpful to see a direct link to the free online tutoring services at [our institution].
- 21. How important would it be for you to read a short bio of your tutor before a tutoring session? A bio is a short paragraph containing information about someone. This is an example of a bio: Saghar Shaldin is an experienced Math 104 and Japanese tutor. She's a former [Our Institution] student who transferred to [Another Campus] and is majoring in Economics. Saghar speaks English, French, and Japanese.

Not important 1 2 3 4 5 Very important

- 22. What kind of information would you like to read in the tutor bio? Click all that apply.
 - a. Name
 - b. Content area expertise
 - c. Other subjects that they tutor in
 - d. Major
 - Other languages that they speak e.
 - Languages that they can tutor in f.
 - A fun fact about them g.
 - None of the above h.
 - i. Other
- 23. Do you use any scheduling software (for example, iCalendar and Outlook)? Click all that apply.
 - iCalendar (Apple)
 - b. Outlook
 - c. Google Calendar
 - None d.
 - Other e.
- 24. Would it be helpful for you to have your tutoring appointment automatically saved in your calendar?
 - a. Yes
 - No b.
- 25. Which one is more important to you when seeking tutoring support?
 - To be able to work with a specific tutor
 - b. The days and times when tutoring is offered
 - Both c.
 - Other d.
- 26. Which do you prefer more: online tutoring or in-person tutoring?
 - Online tutoring more a.
 - b. In-person tutoring more
 - No preference C.

- 27. Which do you prefer more: making an appointment or drop-in tutoring?
 - Appointments more a.
 - b. Drop-in more (no appointment needed. You receive tutoring on first-come first-served basis)
- 28. Which do you prefer more: one-on-one tutoring or group tutoring?
 - One-on-one more
 - Group more (two or more students working b. with a tutor at the same time)
 - c. No preference
- 29. Please, choose the option that best applies to your content status:
 - **Current SDCCD student**
 - Former SDCCD student (no longer plan on attending SDCCD after Spring 2021)
- 30. What is your age range group?
 - Under 18
 - b. 18 - 24
 - 25-29 c.
 - 30-39 d.
 - 40-49 e.
 - f. 50 and over
 - Prefer not to say
- 31. How do you self-identify?
 - Female a.
 - b. Male
 - Non-binary c.
 - Unknown d.
 - Prefer not to say e.
 - f. Other
- 32. How do you self-identify?
 - Asian a.
 - Black b.
 - Latinx c.
 - d. **Native American**
 - Pacific Islander e.
 - f. White
 - Two or more g.
 - Prefer not to say h.
 - i. Unknown
 - j. Other
- 33. Is English one of your first/native languages?
 - a. Yes
 - b. No
- 34. Are there any additional comments or feedback that you would like to share?





FEATURE ARTICLE

Fully Scaling Up Corequisite Models in Math: Challenges and Successes

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ABSTRACT

DE programming in higher education should be designed to increase student success, and well-designed corequisite models have shown great potential as an accelerated option for completion of the first college-level course in math. With the support of a Texas Higher Education Coordinating Board grant, Tarleton State University, a member institution of the Texas A&M University System, revamped its developmental education (DE) program to exceed requirements for the Texas Success Initiative by fully scaling up student enrollment in corequisite models to 100%. Along with a multi-pronged approach to help students satisfy any TSI liabilities, Tarleton's revamped DE program includes holistic advising practices that use multiple measures to inform placement decisions, a robust expansion of corequisite models, refinement of assessment protocols, inclusion of peer mentoring services, and two intervention options to address academic underpreparedness and issues with self-efficacy in math. Findings from the first year of implementation were favorable and demonstrated a significant increase in course completion when compared to the previous year. Limitations of this study and areas for future research were also discussed.

Keywords: corequisite models, developmental education, math, student success

ostsecondary institutions and states have continually reformed their developmental education (DE) practices to facilitate higher levels of success among students who are not yet collegeready. In Texas, many DE reformations have been in response to legislative state mandates, such as the Texas Success Initiative (TSI), as well as requirements set forth by the Texas Higher Education Coordinating Board (THECB). Most recently, the passing of House Bill 2223 (2017) into law requires postsecondary institutions to enroll a percentage of students who are not yet college-ready in corequisite models by subject matter (i.e., 25% by Fall 2018 semester, 50% by Fall 2019 semester, 75% by Fall 2020 semester).

From their inception, corequisite models were designed to address financial and time losses experienced by students in traditional prerequisite DE programming, which consisted of multi-semester, non-credit course sequences (Ran & Lin, 2019). Since 2007, corequisite models have been gaining popularity among postsecondary institutions and states and are viewed as a promising accelerated learning program (ALP) for students. With respect to the subject area of math, Boatman (2012) studied corequisite model implementation among students in Tennessee and reported significantly higher levels of fall-to-spring persistence and credit hour completion rates. Similarly, Logue et al. (2016, 2019) studied

corequisite model implementation among students in New York and reported significantly higher course pass rates in math, success in courses beyond math, and increased graduation rates.

Ran and Lin (2019) noted that the way in which corequisite models have been implemented varies among postsecondary institutions. For example, the RAND Corporation, the American Institutes for Research, and the THECB studied corequisite model implementation among Texas community colleges in 2016 and defined five different versions: paired course models, extended instructional time models, ALP models, academic support service models, and technology-mediated support models (Daugherty et al., 2018). Although corequisite model design varies across postsecondary institutions, the overarching goal is the same: to accelerate academic readiness, progress, and success among students (Cullinane, 2012).

To support postsecondary institutions' efforts with helping students fulfill college readiness requirements and complete entry-level,

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degree-applicable coursework successfully, the THECB offers institutional grant opportunities. One such opportunity, the College Readiness and Success Models (CRSM), awards competitive grants that support scaling of evidence-based DE practices. Tarleton State University (herein referred to as Tarleton) was a recipient in the 2020 CRSM grant award cycle, which supported 100% enrollment of eligible students in improved corequisite models. To achieve the CRSM grant award requirements, a number of stakeholders at Tarleton worked in collaboration to enhance and expand impactful DE practices. article describes specific institutional challenges we faced in math, aspects of our DE program redesign, and preliminary outcome data

for first college-level course (FCLC) completion in math among firsttime-in-college (FTIC) students.

Institutional Challenges in Math

Prior to applying for the 2020 CRSM grant, we reviewed 5 years of outcome data for FCLC completion in math among FTIC students (see Table 1). The data showed that on average less than one third of FTIC students who enter Tarleton not yet college-ready in math completed a FCLC in math with a final grade of an A, B, or C during their first year of enrollment. While this finding was concerning, we also noted an upward trend in FCLC completions in math for the 2018 and 2019 FTIC cohorts (i.e., n = 150, 31.7%, n = 172,38.8%, respectively). Consequently, these were the first two years that Tarleton implemented the coreguisite enrollment requirements of

House Bill 2223 (2017) at 25% and 50%, respectively, among eligible students.

Table 1 Outcomes for FTIC Students Who Were Not Yet College-Ready in Math

FTIC Cohort	Number of FTIC	FTIC students not college-	FCLC in math
FTIC 2015	students 1,955	ready in math 449 (23.0%)	162 (36.1%)
FTIC 2015 FTIC 2016	2,169	585 (27.0%)	162 (30.1%)
FTIC 2017	1,899	439 (23.1%)	100 (27.4%)
FTIC 2018	2,162	473 (21.9%)	150 (31.7%)
FTIC 2019	2,079	443 (21.3%)	172 (38.8%)

We also examined Tarleton's DE practices and identified two specific institutional challenges in the subject area of math in relation to students who were not yet college-ready. First, students had only two corequisite model options (i.e., College Algebra, Elementary Statistics). Since Tarleton offered four different FCLC options in math, it was problematic to limit enrollment in the other two options (i.e., Contemporary Math, Business Math) to students whose degree programs do not require College Algebra or Elementary Statistics. Second, corequisite models in math were implemented using a comingled approach, meaning the credit-bearing course sections contained students who were college-ready and not yet college-ready. Although corequisite models may be implemented using a cohorted or comingled ap-

The use of

multiple measures

and holistic

assessment

during the initial

advising session

prompts some

students to defer

their enrollment

in a corequisite

model in math for

one semester.

proach, Visher et al. (2012) asserted that similar to learning communities, students experience greater levels of comfort, support, and trust with peers and instructors in cohorted approach-

es.

Revamped DE Program Design

Once Tarleton received official notification that our 2020 CRSM grant project was funded, we immediately made infrastructure changes to centralize the DE program within University College. University College was established in July 2019 as a non-academic unit within the Division of Academic Affairs and housed Tarleton's student support services (e.g., academic advising, career services, peer mentoring, tutoring, supplemental instruction). Centralizing student support services in University College simplified oversight of the DE program and facilitated communication about

students, promoted resource sharing, and advanced consistency with best practices and operational procedures. We also worked collectively with colleagues across departments during this restructuring move to improve and streamline workflow processes for students.

In our revamped DE program, we developed specialized academic advising services to promote success among students. Upon admission to Tarleton, students are assigned to a TSI advisor. During the initial advising session, TSI advisors implement a holistic advising approach (Bailey et al., 2016) that determines DE placement using multiple measures (Ganga & Mazzariello, 2019; Ngo & Kwan, 2015). Multiple measures taken into consideration include TSI Assessment (TSIA) scores with accompanying diagnostic student profiles, high school class rank, high school grade point average (GPA), and grades earned from high school coursework. TSI advisors also work with their advisees to create a personalized academic plan that takes several factors into consideration for academic advising purposes, such as the student's work experiences, non-cognitive factors (e.g., attitudes, behaviors, mindset, motivation), and family-life issues (e.g., childcare, financial aid, transportation, tutoring). Furthermore, TSI advisors enter comprehensive documentation for each academic advising session and any advisor-advisee interactions into Tarleton's enterprise-level, web-based technology systems that are accessible to both the student and institutional stakeholders who have legitimate educational interests.

To improve Tarleton's corequisite models in math, we took steps to address Tarleton's institutional challenges in collaborating with our colleagues in the Department of Mathematics. We developed coreguisite models for Contemporary Math and Business Math to ensure FTIC students had access to all of the FCLCs in math. For all corequisite models, we opted to retain the paired course corequisite model approach (i.e., FCLC paired with a DE course) and strengthen the DE course. The head of the Department of Mathematics selected faculty member liaisons to coordinate a planning team of subject matter experts (e.g., full-time faculty members or adjunct instructors, graduate students, practicing and retired high school teachers) to compile and create repositories of supportive materials for course concepts within each corequisite model in math. Supportive materials were populated into separate course shells in Canvas, Tarleton's learning management system, and included a wide range of technology-mediated learning supports (e.g., Quizlet vocabulary flashcards, brief instructional videos, links to online games).

Lastly, we scaled up peer mentoring services in our revamped DE program. The Coordinator of Academic Coaching and Peer Mentoring developed and launched a peer mentor program with 25 undergraduate student workers who served as the inaugural peer mentors. Each student was assigned a peer mentor who performed weekly check-ins and provided academic and non-academic support.

DE Interventions in Math

In addition to the improved corequisite models, we developed two DE interventions in our revamped DE program. We developed these DE interventions to accommodate students who were either at an Adult Basic Education (ABE) level in math or opted to defer enrollment in a corequisite model for one semester to refresh their foundational math skills. In each DE intervention, instructors held periodic check-in conferences with their students to mutually discuss concerns, feed-

back, and goals. Each DE intervention also incorporated strategies to increase student self-efficacy in math.

ABE Intervention

Each fall, Tarleton admits approximately 25 students who placed into ABE Levels 1–4 on the TSIA ABE Diagnostic in math. A score within this range indicates a math skill level of Grade 8 or below. To serve these students effectively, we developed an ABE intervention course, which was taught by a skilled DE instructor. The ABE intervention instructor offered personalized, technology-infused instruction that reviewed basic math concepts needed to succeed in a FCLC. Similar to corequisite models, each FTIC student enrolled in the ABE intervention was assigned a peer mentor who maintained regular contact to provide academic and non-academic support.

Non-Course-Based Option (NCBO) Intervention

The use of multiple measures and holistic assessment during the initial advising session prompts some students to defer their enrollment in a corequisite model in math for one semester. To provide these students with an opportunity to refresh on foundational math skills, we created a NCBO intervention. The NCBO intervention leveraged aspects of the emporium-style model (e.g., self-paced learning, technology-centered instruction) and a web-based program that uses artificial intelligence to create personalized learning modules for students. Similar to corequisite models, each student enrolled in the NCBO intervention was assigned a peer mentor who maintained regular contact to provide academic and non-academic support.

Outcomes from Scaling Up Corequisite Models in Math

We implemented the DE interventions in the Fall 2020 semester and the improved corequisite models in the Spring 2021 semester, at which time we had achieved fully scaled up corequisite enrollment in math. During each semester, we held frequent planning meetings and monitored student progress in the DE program closely. In our review of preliminary outcome data, we were pleased to see encouraging results, as well as opportunities to further strengthen the DE program. Below is a summary of results, which were deemed exempt from review by Tarleton's Institutional Review Board.

ABE Intervention

In the Fall 2020 semester, 29 students were enrolled in the ABE intervention, of which 27 students (93.1%) completed it successfully (see Table 2). Of these students, 24 students (82.8%) persisted to the end of the Spring 2021 semester, and 19 students (65.5%) were retained in the Fall 2021 semester.

Table 2 *ABE Intervention Student Demographics*

Demographic characteristics	Number of students
Gender	
Female	21
Male	8
First-Generation status	
First-Generation	20
Continuing generation	9
Pell eligibility	
Pell eligible	13
Not Pell eligible	16
Race/Ethnicity ^a	
Non-White	12
White	16

^aOne student did not self-report their race/ethnicity.

Students in the ABE intervention had an average end-of-term GPA of 1.94 and average credit completion rate of 71.6%. Closer inspection of these data showed students attempted an average of 13.24 semester credit hours and earned an average of 9.48 semester credit hours.

NCBO Intervention

In the Fall 2020 semester, 387 students were enrolled in the NCBO intervention, of which 333 students (86%) completed it successfully (see Table 3). Of these students, 320 students (82.7%) persisted to the end of the Spring 2021 semester and 243 students (62.9%) were retained in the Fall 2021 semester.

Table 3 *NCBO Intervention Student Demographics*

Demographic characteristics	Number of students
Gender	
Female	273
Male	114
First-Generation status	
First-Generation	224
Continuing generation	163
Pell eligibility	
Pell eligible	199
Not Pell eligible	188
Race/Ethnicity ^a	
Non-White	135
White	226

^a 26 students did not self-report their race/ethnicity.

Students in the NCBO intervention had an average end-of-term GPA of 2.23 and average credit completion rate of 76.8%. Closer inspection of these data showed students attempted an average of 13.64 semester credit hours and earned an average of 10.43 semester credit hours.

Corequisite Models

Students who completed the ABE or NCBO DE intervention during the Fall 2020 semester enrolled in a corequisite model in math during the Spring 2021 semester. To understand outcome data more fully, we conducted percentage point gap analyses that compared passing rates between students who were college-ready and not college-ready (see Table 4). Findings revealed gaps in student performance, particularly in the Business Math course.

Table 4Corequisite Enrollment and Outcome Data for FTIC
Students Who Completed DE Interventions

Corequisite model & student group	Students	Passed (A, C, B)	Did not pass (D, F, W)	Percentage gap
College Algebra				
College-Ready	508	355	153	-16.73
(Fall 2020)		(69.88%)	(30.12%)	
Not college-ready	143	76	67	
(Spring 2021)		(53.15%)	(46.85%)	
Elementary				
Statistics				-25.72
College-Ready	70	36	34	
(Fall 2020)		(51.43%)	(48.57%)	
Not college-ready	105	27	78	
(Spring 2021)		(25.71%)	(74.29%)	
Business Math				
College-Ready	234	163	71	-40.03
(Fall 2020)		(69.66%)	(30.34%)	
Not college-ready	27	8	19	
(Spring 2021)		(29.63%)	(70.37%)	
Contemporary				
Math				-15.34
College-Ready	16	9	7	
(Fall 2020)		(56.25%)	(43.75%)	
Not college-ready	22	9	13	
(Spring 2021)		(40.91%)	(59.09%)	

To further examine any impact associated with the ABE and NCBO interventions, we compared passing rates between students from the 2020 FTIC Cohort and 2019 FTIC Cohort. Students in the 2020 FTIC Cohort completed a DE intervention in the Fall 2020 semester followed by a corequisite model in the Spring 2021 semester, whereas students in the 2019 FTIC Cohort enrolled in the College Algebra corequisite model during their entry semester (see Table 5). We limited our analysis to College Algebra because that was the only corequisite model in math offered during both time periods. According to these data, performance rates for students who completed one of the DE interventions were 13.48 percentage points higher.

Table 5 Comparison of Fall 2019 and Fall 2020 Student Groups for College Algebra

Group	Passed (A, B, C)	Did not pass (D, F, W)	Percentage gap
2019 FTIC	48 (39.67%)	73 (60.33%)	+13.48
2020 FTIC	76 (53.15%)	67 (46.85%)	

Discussion

DE programming in higher education should be designed to increase student success in a FCLC for which students have been deemed not yet college-ready (Schak et al., 2017). Within recent years, much literature has advocated that well-designed corequisite models have great potential to facilitate

student success in their FCLC in math (e.g., Atkins & Beggs, 2017; Boatman, 2021; Booth et al., 2014; Jaynes et al., 2020). With state legislation in Texas mandating a minimum of 75% corequisite enrollment among eligible students each academic year, it is important for postsecondary institutions to ensure their corequisite models deliver effective and equitable instruction and support. Through the 2020 CRSM grant, Tarleton was supported in revamping our DE program, which enabled us to achieve 100% enrollment of eligible students in improved corequisite models beginning in the Spring 2021 semester.

In addition to addressing our institutional challenges, we believe our revamped DE program has three particular strengths. One strength is the provision of specialized academic advising services. Our TSI advisors are trained to implement enhanced advising methods (Bailey et al., 2016) and use multiple

measures to determine the most appropriate placement for each FTIC students (Ganga & Mazzariello, 2019; Ngo & Kwan, 2015). Our TSI advisors also help each FTIC student develop a personalized academic plan that is mindful of influences beyond school (i.e., work experiences, non-cognitive factors, family-life issues). These holistic advising approaches help FTIC students feel well supported in their academic journey.

Another strength of our revamped DE program is the quality of curriculum supports. The ABE intervention accommodates students who are at an ABE level in math, and the NCBO intervention assists students with refreshing their knowledge of foundational math skills. Instructors in both DE interventions perform periodic check-in conferences with their students and use strategies to enhance student self-efficacy in math. In

addition, students have access to corequisite models in all FCLC options in math that include a wide range of technology-mediated learning supports. Results from our first year of implementation have shown favorable results, as the ABE and NCBO interventions reflected high levels of satisfactory completion and the corequisite model for College Algebra demonstrated higher pass rates among students who completed a DE intervention.

A final strength of our revamped DE program is the presence of peer support among FTIC students. We instituted a structured peer mentoring program that pairs every FTIC student with a knowledgeable and skilled upperclassman who attends to their academic and non-academic needs. Including peer mentoring as

> a component of DE programming has been recognized as an effective and low-cost strategy to support students who are not yet college-ready in math (Deshler et al., 2019).

Concluding Thoughts

Although we have seen favorable results with our revamped DE program, there is still work to be done. For Tarleton's DE program to be successful and sustainable, it is absolutely essential to have continued organization-wide support. Support must include the allocation of dedicated fiscal, human, and technology resources, and more importantly, an institutional mindset that promotes academic success for all students. Furthermore, we must continually assess the effectiveness of our DE programming regularly. By doing so, we will ensure evidence-based practices are being implemented with fidelity in ways that promote success

among every students who are not yet college-ready.

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Disclosure Statement

No potential conflict of interest was reported by the author.

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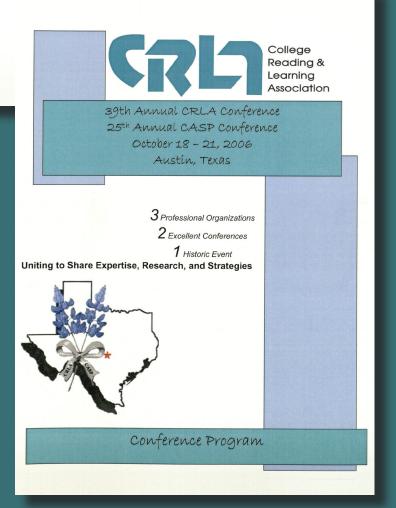
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Celebrating 40 Years of CASP: An Interview With Carol Dochen

Jonathan Lollar, J-CASP Assistant Editor, Texas State University

Camrie Pipper, J-CASP Editorial Assistant, Texas State University

https://doi.org/10.36896/4.2jc1

ABOUT CAROL DOCHEN



Present Day

1982

Carol Dochen, PhD, is the director of the Student Learning Assistance Center (SLAC) at Texas State University (TXST). She also serves as the Law School Admission Council (LSAC) coordinating prelaw advisor for TXST and taught University Seminar 1100 from 1994 to 2020. Carol actively participates in state, regional, and national professional organizations for both developmental education and prelaw advising as a mentor, presenter, author, and consultant. She was awarded the Mariel M. Muir Excellence in Mentoring Award in 2019, the Texas State University System Regent's Staff Excellence Award in 2020, and the First-Year Student Advocate Award from the National Resource Center at the First Year Experience (FYE) conference in 2020.

Carol earned a BS in psychology/guidance studies and an MEd in school psychology from Southwest Texas State University in San Marcos, Texas. She earned her PhD in higher education administration, with a minor in educational psychology, from the University of Texas at Austin. She has been employed at TXST since 1974. Carol served as TADE Past President, 1982–1984, and is currently CASP Historian.

SLAC is a multi-faceted academic support learning center free of charge to TXST students. The center provides individual, group, and online tutoring services, Supplemental Instruction, learning and study skills workshops, standardized test preparation, and learning specialist consultations. SLAC serves over 13,000 students, with over 52,000 student visits per year. Hundreds of outreach presentations are also provided yearly for orientation, University Seminar 1100 classes, and student organizations. SLAC's latest initiative is the Veterans Academic Success Center, housed within the SLAC lab, which provides support for military-connected students.

-CASP: Throughout the 1970s and 1980s, institutions of higher education in the United States began to address long-standing patterns of exclusion with a national focus on access and the resulting open-door admissions movement. Please describe what that period was like for those working in postsecondary institutions and for you, personally, during your early career working in a learning center.

Dochen: I'm going to take you on a little journey through that window of time because I think my journey reflects the growth and development of our field. As an undergraduate, I majored in psychology. I was hired as a reading and study skills paraprofessional student counselor in 1974 at Southwest Texas State University (now Texas State University). They didn't call us tutors at that time because the counseling center director was experimenting with hiring undergraduates and training them as reading and study skills student counselors. Today we call these reading and study skills counselors peer

mentors. I worked in that position for 3 years as a sophomore, junior, and senior for the grand total of \$2 an hour.

The student counselors worked afternoons in a tiny classroom in Old Main, the oldest building on campus. This space evolved into the reading and study skills lab under the direction of De Johnson (now De Sellers). De, an educational reading specialist, was hired in 1973 to create a psychology course to enhance students' academic success. The course, Psychology 1320—Effective Learning, focused on improving students' learning skills, and it had both a classroom and laboratory experience. De taught back-to-back morning sections, and students came to the lab portion in the afternoons to work with

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Jonathan Lollar, Doctoral Student, Developmental Education Texas State University 601 University Drive | San Marcos, TX 78666 Email: jel111@txstate.edu us, the paraprofessional student counselors. Initially, there were six of us hired to provide individual reading and study skills assistance to students.

Psychology 1320 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 began incorporating learning theories, such as behaviorism, 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 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.

J-CASP: How did the learning center become established?

Dochen: Our learning center—which we named the Student Learning Assistance Center (SLAC)—evolved from the reading and study skills laboratory portion of Psychology 1320 as students sought tutoring and writing help with content courses. We knew we needed a larger space because our room in Old Main was simply too small. De convinced the director of the university library to provide us with space, and the lab was moved into the eleven-story library that also housed some administrative offices. Our new learning assistance center expanded services to all students.

[Editors' Note: During the 1970s, the term *laboratory* gave way to the term *center* as the Learning Assistance Center (LAC) concept, which was formulated by Frank Christ at California State University—Long Beach. Christ created the first LAC and was the first to use this term in the professional literature. In his vision, LACs should be housed in centralized locations on campus such as a library, provide comprehensive services to all students, and incorporate theoretical concepts including human development and the psychology of learning. Many of the first LACs, such as Christ's, also experimented with early forms of technology for individualized learning (Arendale, 2010)].

J-CASP: Did you also work at SLAC at that time?

Dochen: Yes. I was working on my master's degree in school psychology from 1977 through 1979. As a graduate assistant, I taught two sections of the Psychology 1320 course as did Richard, another school psychology graduate student. De taught the remaining sections. We offered six or seven sections each fall and spring to accommodate the demand for the course. As SLAC evolved, we were also responsible for administrative duties in the center. Richard took on the responsibilities of hiring and training the tutors and coordinating the drop-in lab, and I coordinated the center's outreach efforts and group content study sessions (much like Supplemental Instruction) for summer bridge students.

During this time on our campus, there were no advising centers, and there was no overall statewide postsecondary placement assessment. Faculty

Our learning

center—which

we named

the Student

Learning

Assistance

Center (SLAC)—

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laboratory

portion of

Psychology

1320.

members served as advisors to students. I remember working with various student groups, including international students, student athletes, and conditionally admitted students. We provided reading, writing, and math assessments, and then helped faculty advisors and coaches place students in appropriate courses. Athletic coaches were especially appreciative of our work with their student athletes. We also helped students with accessibility issues, primarily those who were visually impaired. Our administrative assistant adopted this role as her responsibility by ordering their textbooks on tape and the special recorders. Students with dyslexia also became eligible for recorded textbooks so the number of students we served continued to grow, and eventually, the university created a separate Office of Disability Services.

J-CASP: The university's student population grew from approximately 15,000 students in 1980 to over 21,000 by 1999. This growth must have provided opportunities and challenges for the institution, for SLAC, and for the Effective Learning course.

Dochen: Faculty members served as advisors throughout much of the 1980s. But if you were an undeclared major, your advisor was a counselor from the counseling center. Robert Hardesty, our president at the time, had a vision to create new support for undeclared majors by establishing the College of General Studies (now University College). Eventually, De was promoted to dean of this new college, and I was hired to replace her as director of SLAC in 1987. De's appointment truly fostered the growth of SLAC and the Effective Learning course

through the 1980s and 1990s.

During the early 1980s, the Psychology 1320—Effective Learning course evolved into Educational Psychology (EDP) 1350, keeping the same name. The course was realigned with the College of Education, which had a department offering educational psychology graduate courses. Several faculty lines had also been established to hire instructors to teach EDP 1350 through the College of Education. In 1986, Russ Hodges was one of those faculty members hired; he also served as SLAC's Outreach Coordinator.

Over the years, SLAC and EDP 1350 often worked in tandem, supporting students from underserved and at-risk populations through various conditionally admitted student programs. Many of these programs required students to enroll in EDP

The first "College

Student Academic

Support Programs

Conference"—

as it was known

then—was officially

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Reading and Study

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at Austin and the

Texas Chapter of

the Western College

Reading Association.

1350. In fact, in 1999, De, Russ, and I conducted a longitudinal study of conditionally admitted students enrolled in EDP 1350 that produced several statistically significant results in terms of these students' academic success and persistence compared to similar students not enrolled in the course. This research, along with similar research being conducted by Claire Ellen Weinstein at the University of Texas at Austin, convinced the Texas Higher Education Coordinating Board to authorize formula funding for up to 3 hours of credit for what were then called "Learning Frameworks" courses. Before that time, these student success courses could be offered but did not generate formula funding. Once funding was established, De, Russ, and I provided training to institutions across Texas that were creating learning frameworks courses. That eventually led the three of us to co-author Academic Transformation: The Road to Col-

lege Success, a theory- and research-based student success textbook now in its third edition.

J-CASP: Let's now transition to events leading up to the creation of the College Academic Support Programs conference.

Dochen: According to archival records, College Academic Support Programs, or CASP, took twelve years of planning before it became a reality. Two important events took place prior to our first conference. In 1982, the Coordinating Board sponsored a workshop in Austin on Improving Developmental/Remedial Education. Texas educators attended from both 2- and 4-year institutions. These were educators administering or teaching

multiple levels of developmental reading, writing, and math courses or running learning centers. The Coordinating Board published a proceedings booklet, so we have an actual record of some of the sessions that were given. Hunter Boylan gave a presentation on "Measuring the Success of Developmental and Remedial Programs" and another one on "Effective Instructional Methodologies for High-Risk Students." Ann Faulkner, a reading faculty member in the Dallas County Community District, presented a session on "What's in a Learning Center." There were many panel sessions provided as well. For instance, Kay Henard, coordinator of the Access Program at Amarillo College, was highly involved in our field before CASP was created, and she served as one of the panelists.

That same year the National Association

for Remedial/Developmental Studies in Postsecondary Education (NARD-SPE), which became NADE [now named TxNOSS], had a Texas chapter workshop in Houston. Both meetings provided opportunities for educators to converse on important issues in our field and allowed us to make final plans for a statewide conference.

J-CASP: Tell us about your memories of our first CASP Conference.

Dochen: The first "College Student Academic Support Programs Conference"—as it was known then—was officially sponsored by the Reading and Study Skills Lab, known as RASSL, at the University of Texas at Austin and the Texas Chapter of the Western College Reading Association. It took place in October of 1982. Pat Heard, the director of RASSL, was the site chair; she and Denise McGinty and other RASSL staff members organized the conference. It was held at the Villa

Capri hotel in Austin, which has since been demolished. My role was helping plan the program.

Claire Ellen Weinstein, from the University of Texas at Austin, was our keynote speaker. I had never heard of her, but after listening to her engaging and humorous talk, I immediately became a fan. Her topic was called "Reading is More Than Meets the Eye," which focused predominantly on metacognition and cognitive learning strategies. She also talked about her individual learning skills course that she developed in 1977. This course eventually evolved into Weinstein's 3 credit-hour Educational Psychology (EDP) 310 course based on her Model of Strategic Learning. And De and I were thinking, well, it's similar to our Psychology 1320 course; however, it's much more heavily based on cognitive

theories and strategies. Our course was more behavioral-based, especially with our students' selfchange project. Over the years, we formed a strong professional relationship and friendship with Claire Ellen and spent a lot of time collaborating. We hired many of her graduate students to teach our course, too.

J-CASP: What were some of the topics offered at the first CASP conference?

Dochen: It was 1982. CASP sessions focused on academic support for disabled students, research and evaluation of learning centers, programs and grants, retaining high-risk student populations, intensive summer programs, early forms of Supple-

mental Instruction, and using computers to track usage and provide accountability. There were also sessions that described successful developmental reading, writing, and math programs as well as sessions on English as a Second Language instruction. Our first conference also had four interest groups: funding and grants, evaluation, higher risk students, and learning centers and computers. Interestingly, when you look at CASP programs from 1982, 1992, 2002—and even now in 2022—the conference sessions and topics are all guite similar except for the influence and integration of new technologies.

J-CASP: In 1985, the Texas Higher Education Coordinating Board created the Committee on Testing to consider the merits of a state testing program that would measure the basic skills of college students and provide a basis for improving the quality of higher education in Texas. As a staff member

appointed to assist this committee by your university president, you coauthored its landmark 1986 report A Generation of Failure: The Case for Testing and Remediation in Texas Higher Education. The report recommended that first-year students entering a public college or university in Texas be tested in reading, writing, and mathematics skills at levels required to perform effectively in college. What are your memories of working with this committee?

Dochen: At this time, institutions had been creating their own assessment and placement systems. Business professionals as well as educators (instructors, department chairs, deans, vice presidents, and, in some cases, presidents) from both 2-year and 4-year institutions testified before the committee about the need for basic skills proficiency. It

was important to so many of us—even students—to create a statewide standardized assessment. Think about students starting at a 2-year institution and then transferring to a 4-year institution where they had different placement requirements for college-level courses. One dissenter who I remember giving testimony to the committee was an attorney for the Mexican American Legal Defense and Education Fund. He was concerned, and rightly so, about potentially biased testing that would disproportionately place Hispanic students in developmental courses. I know that he was raising a real issue, but for the most part, everyone was on board.

J-CASP: The Texas Academic Skills Program (TASP) was created by the 70th Texas Legislature in 1987 when Bill 2182 was passed into law. The legisla-

tion required students to pass three sections of the TASP test before they could enroll in their upper-level courses and before graduating from a certification, associate, or baccalaureate program. TASP was first administered in March of 1989. How did educators prepare for this new statewide policy and how did it affect the direction of CASP?

Between
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of TASP.

Dochen: Between 1987 and 1989, over 700 educators were involved in committees supporting the creation of TASP, which focused on basic skills development in reading, writing, and math, advising and placement, and learning support. Half of the educators were selected from 2-year schools and half came from 4-year schools, with 33% of the educators identifying as Black or Hispanic. I was a member of the Texas Academic Skills Council with 27 other people from around the state. National Eval-

uation Systems was contracted by the state to create the assessment. TASP was first administered—as I remember it—on a small scale in March 1989.

TASP was very much the focus of CASP. The 1987 CASP conference, held in Austin, was themed "Investing in the Future." Joan Matthews, the Acting Director of Testing at the Texas Higher Education Coordinating Board, was the closing keynote speaker. Her session was titled "An Update on the Basic Skills Testing and the Council on Learning Excellence."

The theme of the 1988 CASP conference held in El Paso, TX, was "Preparing for Change," and many of the sessions were focused on helping our educators respond to the coming challenges of implementing TASP. In 1989, the year TASP would be implemented, CASP's keynote speaker was Jaime

Oscar Escalante, the famous Garfield high school teacher known for transforming the lives of his high school students by convincing them to enroll in upper-level mathematics courses. He was the subject of the 1988 film, Stand and Deliver. CASP was being co-sponsored by the Coordinating Board, and they paid his speaker fees. John Corcoran, our second keynote speaker that year, was a literacy advocate. He claimed he was illiterate until the age of 48, despite graduating from a public Texas university. CASP clearly conveyed the message that change was on the horizon.

In April 1989, the Texas Academic Skills Council, Houston Community College System, and North Harris County College (now Lonestar College) held a special meeting specifically on TASP titled Texas Academic Skills Program Practitioners Confer-

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ence in Houston. The conference provided Texas postsecondary educators from around the state with additional TASP information and support.

J-CASP: What other notable CASP keynote speakers come to mind?

Dochen: CASP has featured many memorable keynote speakers over our 40 years. I believe our most notable was Claire Ellen Weinstein. I think she keynoted six times. Her presentations were always refreshing, engaging, personal, and relevant and always focused on how we could help students learn. I remember she would give the audience a list of 10 or 12 words to memorize. She would say each word slowly—"pillow," "blanket," "moon," etc., then set a timer for at least a minute and tell a personal story to distract everyone. After the story, which was usually hilarious, she would ask us to write down all the words we could remember. Inevi-

tably, most of the audience members would include the word "sleep" even though it was never one of the words she listed. She was priming us for her topic on schemas and how to help students improve their memory. Claire Ellen was an incredible storyteller and scholar and became synonymous with CASP. You always felt grateful to be in her presence because she was just so passionate about helping students succeed.

J-CASP: CASP has held two joint conferences with CRLA. Our first was in 2006 in Austin, and our second was in 2012 in Houston. This collaboration must have broadened the appeal of CASP and provided new networking opportunities for attendees. However, merging the conferences must have had its challenges. What were some of those challenges?

Dochen: I think there are huge advantages to attending a joint conference—especially for folks that cannot attend both state and national conferences. But hosting a joint conference is tricky in terms of merging the goals of our CASP state board with the goals of the CRLA national board. I also think that it can be especially challenging not letting the national conference overshadow CASP to the point where CASP has no identity. I also remember other issues such as dividing up the financial responsibilities, creating a logo representing both organizations, and merging site and program committees together. There is also the issue of how the new board officers are installed and awards are given out—separately or together? Yes, it can be a long and tedious

> process for those involved, and it takes careful negotiating skills.

> J-CASP: Over the years, CASP's sponsoring organizations have jointly recognized outstanding leaders in the field, including yourself, with awards such as the CASP Presidential Award and the CASP Lifetime Achievement Award. Can you tell us more about the history of these and other awards?

> **Dochen:** It was not until the mid-1990s that we have records of CASP giving awards. CASP's Lifetime Achievement Award has come to represent one of the highest honors given by the CASP board to deserving members. The award recognizes individuals for their contributions over the entire span of their career rather than for a single contribution. The first Lifetime Achievement Award wasn't actually given at CASP. It was presented to Sylvia Lujan, from UT Pan-American, at her retirement party in 1995. Oth-

er early recipients of this award included Frances McMurtray in 1996 and Gladys Shaw in 1997. Occasionally, the award is given to more than one individual, which happened for the first time in 1998, when both Anna Harris and Cynthia Teter received the award. As of this year, Kathy Stein joins the 25 other recipients that have received this prestigious award.

The CASP Presidential Award was created in 2012 by the CASP Board to honor individuals that have made highly significant contributions to the members of TADE and TxCRLA. I was honored for this award in 2012 for my work in helping to establish TADE, TASP, and CASP; David Caverly received this award in 2018 for his research, scholarship, and having established and conducted the Technology

Institution for Developmental Educators (TIDE) for nearly 20 years.

For a time, TxCRLA also offered the "Developmental Educator of the Year Award," given to individuals that made a significant contribution to the field through their scholarship or practice. Claire Ellen Weinstein received this award in 1996 for her work creating the Strategic Learning Model and the *Learning and Study Strategies Inventory (LASSI)*. She also received the Lifetime Achievement Award in 2011. Other early recipients included Gerald Corkran in 1997, Gail Malone in 1998, Janith Stephenson in 1999, and Mary Ann DeArmond in 2000. This award, however, has not been given out in recent years.

J-CASP: The sponsoring organizations of CASP also provide scholarship funds to their members awarded at the CASP conference each year. In fact, one of the scholarships—the Carol Dochen Professional Development Award—bears your name. Can you speak about the creation of these scholarships?

Dochen: James Mathews, former SLAC lab coordinator, received the first CASP Ann B. Faulkner Professional Development [Scholarship] Award in 1995. This scholarship was given out for several years then scholarships became more associated with either TADE or TxCRLA specifically. Initially, we had the TxCRLA Professional Development Award and the TADE Professional Development Scholarship. Then the scholarship names evolved to honor some of our CASP members. TxCRLA now has the Gladys R. Shaw Professional Development Award and the Claire Ellen Weinstein Graduate Student Award. I was recently honored when TADE renamed their scholarship the Carol Dochen Professional Development Scholarship. The awards have been given mostly to graduate students, which is a wonderful way for these organizations to support their career interests in developmental education.

J-CASP: Over the span of 40 years, you have witnessed CASP's sponsoring organizations expand their professional development offerings through conferences, webinars, a listserv, and an academic journal. In the years to come, how do you see CASP sponsoring organizations continuing to meet the needs of educators within our field?

Dochen: I'm just amazed at what has transpired. *The Journal of College Academic Support (J-CASP)* is just brilliant. The listserv is great, too. I like the idea of the virtual *CASP Conversations*, which emerged now that we've all become Zoom savvy. For the past 2 years, CASP has hosted our virtual conferences, and they have been outstanding as well. However, I look forward to our return to face-to-face conferences. I know travel budgets are going to be limited, but the real payoff is being able to network and develop personal relationships with our colleagues, mentor new people in the field, and support those seeking to take on responsibilities of leadership

roles in our professional organizations.

J-CASP: In your longtime role as CASP historian, you have made a wonderful contribution as the keeper of the history. From this historical perspective, do you have any last words of wisdom to offer?

Dochen: Yes. One of my favorite mantras is "new people offer new ideas." That's what I value. When you bring in new people, they're not going to settle for "we've always done it this way." You want your newest educators to rock the boat a bit, to look through a different lens. We need their fresh ideas and perspectives. This is how we thrive as a profession. I often offer this advice to our learning center staff when they are in the process of decision-making. "We employ 50+ tutors, 60+ SI leaders, and several student support staff, so let's ask them and get their advice." The same goes for those in CASP leadership positions. When you need to know where to go or what to do next, ask your members and listen carefully. It's the best advice I can offer.

Disclosure Statement

No potential conflict of interest was reported by the authors.

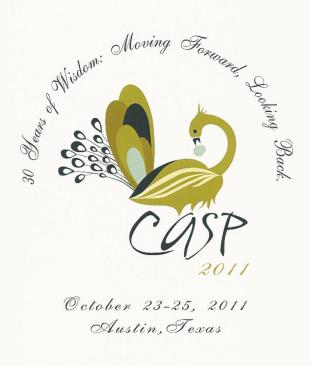
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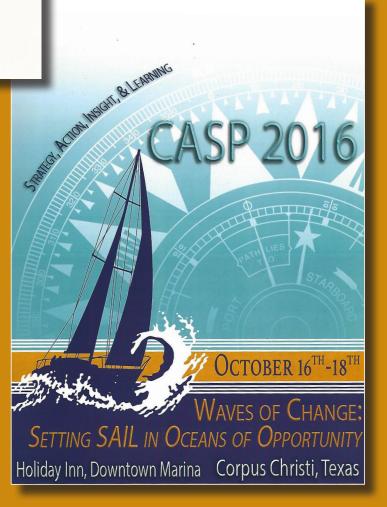


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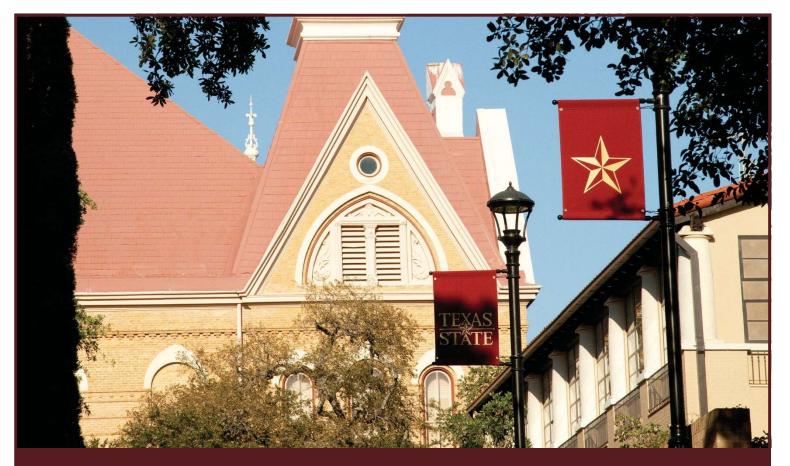
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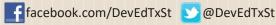
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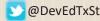
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The Theoretical Alignment of Supplemental Instruction and Developmental Education: When an SI Leader Uses Adult Learning Theory to Underpin Instruction

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upplemental instruction (SI), the offering of additional assistance outside the scheduled and required class time, was developed by Deanna Martin and David Arendale in 1974 at the University of Missouri-Kansas City (Martin & Arendale, 1992). An SI leader (SIL), who is a nearpeer, provides interactive sessions to reinforce concepts delivered during class time. As SI has grown and developed over time, it has taken on several names from first being called supplemental course instruction to other names such as peerassisted learning (PAL), peer-assisted study sessions (PASS), facilitated study groups (FSG), and peer learning sessions (PLS) (D. Arendale, personal communication, February 12, 2022; Dawson et al., 2014; Paabo et al., 2019). SI was initially developed and intended for graduate, professional, and medical students who found themselves struggling in challenging courses (Arendale, 2002; D. Arendale, personal communication, February 12, 2022). SI is now utilized in undergraduate, graduate, and professional student courses, particularly to assist students who are enrolled in high-risk courses (Martin & Arendale, 1992; Dawson et al., 2014). Targeting high-risk courses (i.e., those in

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Dr. Emily K. Suh, Assistant Professor of DE, Texas State University 601 University Drive | San Marcos, Texas 78666 Email: emily.suh@txstate.edu which thirty percent or more of the students fail, withdraw, or receive a 'D' for the course) rather than high-risk students attempts to eliminate the stigma that coincides with asking for academic support and to remove the deficit language that is commonly associated with seeking help (Martin & Arendale, 1992). Furthermore, SI has been shown to be equally effective for students regardless of gender identity or ethnicity (Dawson et al., 2014; Martin & Arendale, 1992). While SI has been shown to be effective for diverse groups of students, its theoretical ties to adult learning have not been fully examined.

The purpose of this article is to explore SI's alignment to theories of adult learning and development which are the underpinnings of developmental education. We begin by identifying adult

learning and development theories that have influenced the field of developmental education and then examine descriptions of SI in the literature to explore SI's utility as a student support strategy within developmental education contexts. We conclude by providing examples from our own application of SI, including pragmatic tools for helping both instructors and SIL be successful in the classroom. We demonstrate how these SI practices are consistent with adult learning and development research. The tools we describe were developed with a developmental education context in mind but can be applied in any SI context.

Foundational Theories

Several theories provide the foundation for SI, including constructivism (Piaget & Inhelder, 1958), the cone of experience (Dale, 1946), and the hierarchy of learning improvement programs (Keimig, 1983). Tin-

to's theory on college persistence also has been referenced as a major tenet of SI's theoretical framework because of SI's emphasis on persistence (Arendale, 2000; Hurley & Gilbert, 2008; Tinto, 1987). However, in the wake of SI's growing popularity, scholars have connected the practice to additional learning theories (James & Moore, 2018). One notable addition is the integration of Vygotsky, particularly his zone of proximal development (ZPD) and sociocultural theory of cognitive development (STCD). The ZPD posits that a learner can achieve the acquisition of new knowledge with the guidance of a person who already has that knowledge. Through scaffolding, students can move from reliance on this more knowledgeable guide to independence. SI sessions incorporate these same

techniques. Further, Vygotsky's sociocultural theory of cognitive development highlights the important role social interaction plays in human development. SI also acknowledges this importance by primarily using collaborative learning strategies during SI sessions. While the aim of this paper is to continue the conversation forward, a fuller discussion of the theoretical literature can be found in Mas (2014), Hodges and White (2001), Hurley and Gilbert (2008), and Skoglund et al. (2018).

Theoretical Connections Between SI and Developmental Education

Martin and Arendale (1992) recommended that SI be used in courses where students are motivated to learn and where the course is perceived as rigorous. Indeed, they argued, "[If] students are

not being successful in courses then perhaps colleges should change the way courses are taught" (Martin & Arendale, 1992, p. 1). Despite alignment between this claim and core values of developmental education, Martin and Arendale specifically discouraged the use of SI in developmental education. The authors based this recommendation on their inclusion of Keimig's (1983) hierarchy of learning programs within the theoretical framing of SI. Keimig classified programs into four types based on the comprehensiveness of provided support services and their level of institutionalization. Martin and Arendale (1992) identified SI as a part of what Keimig described as a comprehensive learning system. Based upon Keimig's assumption that developmental education seeks to remediate academic or non-cognitive deficiencies and develop decontextualized critical thinking and academic skills, Martin and Arendale (1992) argued

against pairing SI with developmental courses:

It has been our experience that SI is least effective when it is attached to remedial classes. First, students may refuse to attend SI sessions if they do not perceive the course to be demanding. Second, SI has not been effective for students who cannot read, take lecture notes, write, or study at the high school level. Therefore, we stress to adopting institutions that they utilize SI in non-remedial settings with high-risk, demanding courses. (p. 5)

This recommendation failed to consider overlap between the purpose and practices of SI on the one

hand and the purposes and realities of developmental education on the other. Afterall, developmental education has been defined as "the integration of courses and services guided by the principles of adult learning and development" (Boylan et al., 2017, p. 2), and—as we discuss below—the support offered in SI closely aligns with several adult learning and development principles (Hurley & Gilbert, 2008).

Given the role of SI in supporting remedial and other courses, why might there be caution against pairing SI with developmental courses (D. Arendale, personal communication, February 12, 2022; Martin & Arendale, 1992; Skoglund et al., 2018)? We posit their recommendation stems from two problematic assumptions: (a) that students will not find developmental courses challenging enough and thus will not warrant attending SI, and (b) that SI is ineffective for students who lack basic high school literacy and academic skills (e.g., reading, writing, note-taking). However, the authors fail to provide references to back their claims, suggesting that these assumptions are not supported by the literature. Only about half of all students enrolled in developmental reading continue on to their college-level coursework, suggesting that there is some level of difficulty in these courses (Ganga et al., 2018). Furthermore, SI can be effective for students seeking to acquire basic academic skills if modifications are made to the original model. Martin and Arendale (1992) advocated for voluntary SI attendance as outlined in the original vision for SI. Arendale argued that "students who are at risk are notorious for their reluctance to refer themselves for assistance until much too late" (2010, p. 42). As a result, some SI scholars now advocate for mandatory SI sessions (Dalton, 2011; Mas, 2014). We concur with these more recent proponents of SI and further argue that SI should be a mandatory component of a developmental course. Indeed, we see SI as providing an important instructional space for introducing and practicing skills related to core aspects of developmental education, including students' self-regulated use of learning strategies (Weinstein et al., 2011) in order to develop competence and autonomy (Chickering, 1969). We base our position on the alignment between SI and the adult learning and development theories which create the foundation for developmental education, as well as the traditional definition of developmental education.

Connections between Adult Development and Adult Learning Theories and SI

The major elements of SI (e.g., collaborative learning, funds of knowledge, etc.) are supported by adult learning theories (e.g., humanist theory, experiential learning, and transformative learning). Reardon and Valverde (2013) articulated this connection well:

The Supplemental Instruction (SI) program relies on the foundations of adult education. In particular, it depends heavily on peer support in difficult classes. The andragogical approach highlights the importance of addressing different learning styles and helps students to engage in collaborative learning and problem solving. (p. 382)

Students who are enrolled in developmental education courses are adult learners and also need such adult learner strategies. Developmental education courses support adult learners, and thus, instructors should apply strategies grounded in theories of adult learning (Kasworm, 2000; Trotter, 2006). These learning demands are the same for students' experience in SI.

The field of developmental education was built upon a combination of adult development theories (Hurley & Gilbert, 2008). These theories can be summarized as belonging to what Merriam and Caffarella (2006) identified as psychological (e.g., cognitive and intellectual development), sociocultural (e.g., awareness of social roles and their influence on socially constructed identity markers on development), or integrative frames (e.g., examining the interaction and intersection of biological, psychological, and sociocultural lenses). Across these distinct theorizations of how adults grow and develop, Trotter (2006) summarized foundational adult development literature as arguing that (a) adults' experience is a resource which should be utilized in their learning, (b) adults need to be actively involved in planning their education based on their personal interests, and (c) adult education should encourage reflection and inquiry to promote individual development. While these development theories focus on learning as it applies to progressing into and through adulthood, adult learning theories explicitly focus on how and why adults seek formal and informal learning opportunities in pursuit of personal goals.

Central to many theorizations of adult learning is the notion of trust and the trusting relationship that must be cultivated by the educator and the adult learner. Indeed, Cohen (1995) describes learner-educator trust as one of the six core functions of the mentoring role. Although much of the literature emphasizes the importance of educators trusting their students (i.e., Henschke, 2012, 2013), adult learners must also be able to trust the educator in order to maximize the potential for experiential learning.

Adult learning theories can be similarly divided into three forms: humanist theory (Maslow, 1970; Rogers, 1969), experiential learning (Kolb, 1984; Schön, 1983), and transformative learning (Mezirow, 1985). Like Maslow (1970) and other

humanist theorists, Rogers (1969) emphasized the importance of learning through doing, the learners' responsible participation in the learning process, the learners' continued openness to learning the process of learning. Humanists identify varying levels of learning based on the content's relation to learners' formal learning needs, sense of self-construction, and ability to reinforce autonomy (Bélanger, 2011). Rogers further outlined the role and methods of the facilitator as supporting the learning environment, providing resources (including themselves), and engaging as a participant learner. In particular, the importance of the facilitator as a resource provider and participant learner aligns with SI practices such as preparing review or expansion materials for students to utilize in the SI session or attending the paired class with students.

Another theoretical connection between adult learning theories and foundational SI theories can be found between Dale's (1969) cone of experience and adult learning theories such as experiential learning (Kolb, 1984) and transformative learning (Mezirow, 1985). Dale's cone of experience (1969) indicated that students learn most effectively by being actively involved in work that is relevant to their target job and suggests that instructors ought to create direct, purposeful learning experiences that provide this relevancy. Experiential learning theory posited learning as occurring within a cycle of concrete experience, reflective observation, formation of abstract constructs, and active experimentation, which in turn influences future concrete experiences. Experiential learning thus assumes that learning is an inductive process in which experience informs reflection, which ultimately

results in learning. Kolb argued that through practicing a reflexive attitude toward their experiences, learners transform knowledge into learning. Furthermore, as students engage in and develop from experiential learning, they grow as autonomous learners (Boggu & Sundarsingh, 2019; Moon, 2004).

Transformative learning similarly emphasizes the importance of a highly engaged learner who is changed by their learning experience (Mezirow, 1985). The reflective aspect of experiential and transformative learning, particularly as it relates to experimentation and moving from concrete experience to abstract understanding, is highlighted in SI practices, such as Think-Pair-Share (i.e., by having students individually read a SIL's handout before

working together to fill out a chart and then sharing what they have learned from the activity). Mezirow (1985) distinguished between an assimilation process (conforming new experiences to one's existing knowledge structure) and a transformative process (reordering the knowledge structure itself), noting the essential role of the educator in transformation. Transformative learning can be conceptualized as a cyclical process involving questioning beliefs, learning by reexamining beliefs, transforming the frame of reference, and taking a new course of action, which again leads to questioning beliefs. Bélanger (2011) emphasized the connection between transformative learning and social change spurred by critical reflection and emancipation through consciousness-raising and dialogue.

Among adult development and learning the-

ories, there are several overlapping concepts. Adult learning theory scholar, Eduard Lindeman (1926), explained that: (a) adults' needs and interests motivate their learning, (b) adults' approach learning through a life-centered orientation, (c) adult learning is best informed by experience, (d) adults need to be self-directed, and (e) individual differences increase with age. Other notable adult learning theorists similarly emphasize the importance of self-direction (Knowles, 1975; Mezirow, 1985). For example, Knowles' (1968) theory of andragogy centralizes emphasized the importance of adult learners' internal motivation and self-direction, which often provides these students with self-fulfillment in meeting their learning goals. Several of these tenets are echoed in the SI literature, which similarly emphasizes the importance of learning through experience and connecting learning to adults' needs and interests (James & Moore, 2018). In summary, adult

learning and development theories can inform the SI model design by drawing attention to the way adults learn, their motivation for learning, and their ability to reflect upon their learning experiences in order to meet their individual goals.

Adult learning theories are not flawless, however, and we suggest that SI may provide a practical opportunity to address some of the challenges stemming from instruction rooted in traditional adult learning theories. In particular, critical scholars have questioned some key adult learning theories for implicit assumptions that the individual learner is "insulated from the world, fully in control of his or her own learning" (Merriam & Bierma, 2014, p. 58; see also Lee, 2003; Pratt, 1993; Sandlin, 2005). In the tradition of critical

educators, these scholars argue that individuals and their learning cannot be understood without acknowledging the historical, sociocultural, political, and economic contexts in which they learn. In the case of students enrolled in developmental education, adult learning and development theories must recognize how inequitable access to resources and prior formal and informal education influence students' preparation for college. Sandlin et al. (2011), for example, examined how traditional adult learning and development theories could be updated to include informal learning and learning that incorporates technology. Guided by critical adult learning lenses that incorporate the contexts in which adults learn and develop, SILs can intentionally draw from students' range of experiences as resources to deepen the relevance and increase the effectiveness of their instructional support.

An Example of Practical Application of Adult Learning Theory-Aligned SI

In the following section, Katy Glass describes her work as a SIL, connecting her work in gateway and developmental education courses to the literature discussed above.

In the fall semester of 2011, I began working as a SIL in an algebra-based physics class while pursuing my bachelor's degree at a regional university in a large city. At the university, the students were self-driven; thus, they came to class prepared and ready to learn. The majority of students performed successfully in the class even without attending SI sessions. Although there were approximately 100 students in the course, my sessions were small, averaging about five students. The small number of students volunteering for my SI session was consistent with the predictions of Martin and Arendale (1992), who stated that only those students who found a course challenging would seek out extra help. My lessons consisted of practice worksheets and physics guizzes, discussions, or sessions in which we focused on students' homework. Primarily these students saw me as a less intimidating authority figure that could answer their questions, which seemed to be enough to help them succeed.

In 2018, I started working at a community college in the same city as a tutor and SIL for English Mega Plus and Integrated Reading and Writing (INRW) courses. My experience at the community college was drastically different than my experience at the university because of the different types of learners I encountered at the two institutions. At the community college, students who were placed in an English Mega Plus or Plus course (two variations of a corequisite developmental English and Composition course) were just beginning to learn to use learning and study strategies. Many of these students were also forming their first positive relationships with their instructors. Students who were

placed in these courses commonly fit into one or more of the following categories: those experiencing financial hardship, non-traditional adult learners, and English Language Learners (ELLs).

How much students trusted me as a SIL truly guided my instructional practices. I knew the more students trusted me, the more beneficial the sessions would be for them. Therefore, I have developed many strategies over the semesters to make my students think of SI as a reliable resource for learning and encouragement instead of yet another stress-inducing task. Thus, my lessons for students at the community college are creative, sensitive, and far less off-putting than the practice physics quizzes I used in the university setting. Although trust is not an area that has been previously explored in SI literature, it is a foundational concept in adult learning (Cohen, 1995) and is essential to establishing a strong SI relationship.

Aware of the critical adult learning theories which challenge educators to recognize the influence of learners' lives and experiences outside of the classroom, I assumed that many of my students had negative previous academic experiences and that these experiences might influence their ability to succeed in college classes. Rogers' (1969) humanist theories underline the importance of learners' openness to exploring the learning process. If my students did not feel comfortable or safe enough to share, they would have yet another barrier added to their learning. Much of a SIL's job is to gain students' trust so that students will be comfortable enough to seek advice when they need help. At the university, because my physics students knew I was an English major, I was constantly trying to prove that they could trust me to understand physics. At the community college, I found myself trying to prove to my students that they could trust me to read their writing and help them get that piece of writing into the student's best draft. Whether in class or in an SI session, some community college students remained fearful of sharing their assignments with their peers and me. When a student showed up for SI but was afraid to share their work or to participate, as a SIL, I tried my best to find a way for the student to comfortably gain knowledge from the lesson. I realized that although there were differences between the type of learners that I dealt with at the university versus the community college, trust and comfort were central to relationships I developed with my students in both settings.

At the college, the standard SI rules of presenting myself as a near-peer, attending class, and preparing group-centered sessions for SI remained important, but I've discovered that because attending students already found college to be an intimidating or unwelcoming space, paying attention to the session environment was of

equal importance to the success of the SI session as were the standard SI rules. Beginning lessons in SI with blank walls, blank poster paper, or blank documents is too similar to classwork and can often be more stress-inducing (Grube, 2014). With students uncomfortable with subjects that they have always found challenging, the lessons, environment, and leader need to work together to create an inviting study group, not a boring and intimidating one. Motivating educational posters and work from past students are important instructional resources that add to the credibility of a SIL while increasing student comfort levels and displaying work from past students shows upfront that the SI program is proud of the students it served. Therefore, when students walked into our lab, they were immediately greeted with music, posters, snacks, and positive feedback.

I preferred to have Lo-fi music playing in the background of all my lessons because I found that my students in the developmental corequisite classes were less likely to provide answers in a room of dead silence. My intentional choice to attend to the physical and emotional comfort of my students aligned with the scholarship of humanist theorists such as Maslow (1970) and Rogers (1969).

One strategy to ease anxieties and boost group participation in poster activities was color-blocking. Color-blocking involves using multi-colored construction paper to organize pre-grouped ideas on blank posters. When I prepared a poster by color-blocking and adding titles or captions, it was easier to get the entire group to participate in writing rather than having to appoint one reluctant person. Another participation-boosting and anxiety-easing strategy was letting students with writer's block type a text to a friend

on their phones rather than type text in a blank Word document. Yet another strategy that helped attendance and participation was the snack bowl. Students who participated during SI got to choose (at least) one snack from the coveted snack bowl. For students with food insecurity, the SI snack is a small resource, but it also is another physical reminder that students are cared for in SI. Faculty demonstrations of care for their students support students' growth in part by creating spaces that students feel are safe for risk-taking (Thayer-Bacon & Bacon, 1996). Students came to my SI sessions knowing there would be comforting music, encouraging posters, a snack, and maybe their own work on the wall. All of these aspects of the space encouraged them to engage and develop.

For SI sessions with my English 1301 Mega Plus students, I discovered that students had a greater comprehension of and participation in my lessons when I gamified the curriculum in ways that provided students with a sense of power rather than helplessness. This is a practical application of Rogers and Maslow's belief that lessons should reinforce autonomy and appeal to the adult learner's formal needs (Bélanger, 2011). In the activity titled "Who's Getting Promoted?," I asked my students to analyze a series of emails for errors from three fake employees in a Think-Pair-Share collaborative learning format. This task referenced Dale's (1946) cone of experience by requiring participants to apply the group's combined knowledge of grammar and punctuation to sample work emails, which many of them were already writing

for work or would need to write in their future careers. "Who's Getting Promoted" followed the process of experiential learning theory as it gave students the power to choose which of the three pretend characters would receive a promotion. During this one SI session, we covered all four stages of the learning experience outlined in Kolb's (1984) experiential learning theory (Abdulwahed & Nagy, 2009). During the concrete experience stage, students individually read through the fake employee emails and began applying their own knowledge as they noticed errors. Next, during the reflection observation stage, students began to share observations with the group as they sought commonalities between editing processes. The abstract conceptualization stage followed with the small group discussions, in which all groups and the SIL came together, confirmed the errors, and decided which employee

had won the promotion. Students experienced the final stage of Kolb's (1984) experiential learning theory, active experimentation, when they then applied the editing knowledge acquired during the SI session to peer editing and their own writing.

The students were invested in this lesson because it allowed them to act out a concrete experience in the shoes of an employer. Students successful with experiential learning grow into autonomous learners who work well in groups or alone (Boggu & Sundarsingh, 2019; Moon, 2004). Although there is ultimately one correct answer to the "Who's Getting Promoted" activity, its focus is more on the group editing process. Peer collaboration provides both comfort and motivation for individual students early in the learning process as

they provide their group or partners with answers in which they are confident. Students can discuss and work together through the difficult parts of the activity, such as determining how many errors are in each email or the winner of the job promotion.

Additionally, by avoiding excessive cold-calling on students and allowing them to edit and present in pairs, this activity and other games like it allow the SIL or the student's partner to be discrete towards students when they make mistakes or struggle by addressing concerns within small pairs and not in front of the entire class, which can be embarrassing and discouraging to an anxious learner. The SIL can also provide additional opportunities for small successes by checking in often on groups. This way, every student gets at least one "good job" per session. Throughout group activities or while working one-on-one, SILs should give praise to each instance of growth they notice, no matter how small. In this way, not only do students feel comfortable enough to allow themselves to learn, but they also receive encouragement each and every session. Giving specific and personal praise is imperative for the SIL when working with adult learners who too frequently have been made to feel like outsiders in their own educational experiences (Henderson et al., 2019). By offering clear and individual praise, the SIL can provide a new foundation of learning experiences for students to build upon.

Conclusion

The major tenets of SI and the theoretical underpinnings of developmental education both align in that they are founded in adult learning theories. Therefore, it made sense to forego some of the earlier warnings against using SI with students placed into developmental education and attempt to integrate SI within our courses. This alignment between the theoretical underpinnings of SI and developmental education—through andragogical principles—becomes evident when framed within the context of Katy's SI sessions. By framing the collaborative learning techniques of SI around the needs and anxieties of adult learners, SILs can effectively engage students placed in developmental coursework. With this article, we have presented our best practices for SILs to engage with students in developmental education in impactful ways. However, there is still much more work to be done to hone SI practices in developmental spaces to ensure the needs of our students are being met in the best possible way. Thus, by sharing our best practices, we hope to create an initial point of discourse for practitioners who are adopting similar practices, as well as engaging in conversations with those who are curious about implementing SI in developmental classrooms.

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PROMISING PRACTICE

Implicit Learning in the Developmental English Classroom: Reducing Anxiety and Improving Student Success

Jo Ward

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Jo Ward, MA, is a professor at The University of Texas at Arlington, where she also coordinates the Developmental English Program and serves on the First Year Writing and Texas Success Initiative Student Success committees. She holds an MA in English from the University of Texas at Arlington. Jo was chosen for a pedagogy award from the Conference of College Teachers of English for her presentation entitled "A Model Approach for Accelerated Learning in Developmental English."

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eaching developmental English has allowed me to help students change the trajectory of their lives, which is priceless. Many times, one of the biggest impediments to student success is not learning how to read and write critically; it is anxiety. Students with writing anxiety tend to write sporadically, avoid class, and produce low-level papers (Tsao et al., 2017). Helping students overcome writing anxiety is why I teach developmental English. While I have never had writing anxiety, I am great friends with anxiety of all sorts. It is a beast and quite fun to outsmart. In my decade of teaching at both community colleges and a 4-year university, I have learned that the writing anxiety I so passionately wanted to slay for my students was far worse than I had imagined when studying to teach writing. However, I have found one instructional strategy helpful—implicit learning. Every type of student stands to benefit because implicit learning can change perceptions drastically, allowing students to move forward more confidently in their academic careers. Implicit learning fosters personal identification with the subject, enhances memory capability, and helps students better understand complex material. Most importantly, implicit learning has an almost magical way of blasting writing anxiety, even for those students who have suffered for years.

Implicit learning occurs in the absence of the intention to learn an unfamiliar skill and is particularly useful when the acquired knowledge is not initially easily verbalized in explicit terms (Cleereman et al., 2019). Implicit learning is simply a way of craftily making learning more meaningful so that students are either not immediately aware they have just absorbed a new concept or else realize that they already understood the concept that was introduced. Once students have gained considerable skill, their ability to absorb new, explicitly taught material improves. In this way, implicit learning complements explicit learning (Dornyei, 2019). There are many tools to foster implicit learning, such as chunking, reciprocal teaching, priming, and emulating. I use priming and emulating quite often. Priming occurs when a student's response to the learning environment is influenced by the previous exposure to a similar task. The process occurs automatically and without conscious awareness (Silkes et al., 2020). Emulation provides the learner with a clear image of how a skill should be performed while simultaneously explaining the concept so that a student can more easily apply the skill gained (Zimmerman & Kitsantas, 2002).

Explicit learning involves more conscious awareness and focus on form; it also typically includes the immediate learner ability to reproduce metalanguage about the skill (Lichtman, 2013). In other words, explicit learning is far more complicated, in-depth and rigid; it is, regarding English, formulaic and rule-based. Furthermore, there are valid reasons why explicit learning should come after implicit learning. Implicit learning occurs more naturally in order for students to achieve acquisition to later apply towards explicitly learned competencies. This is especially the case with grammar instruction which, without some prior implicit learning, can have a "terrifying effect on the students and lower their self-confidence" (Rahman & Rashid, 2017, p. 96). I consider implicit learning a soft, unassuming predecessor to more explicit instruction and assert that the two can peacefully co-exist throughout the entirety of the semester.

Here is an example of priming to allow for implicit learning in the classroom. If a student reads aloud a sentence to me, "Went to the store," I have two options: I can cover the rules of grammar (clauses, sentence structure, fragments, etc.), or I can say something like, "Hey, if I walked up to you in the hall and said, 'Went to the store,' would that

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make sense to you? What's missing there?" The latter is an example of implicit learning. It is also how learners naturally learn a language (and many other things) at a young age. I may follow up with a short remark about fragments, but I do not initially go into a detailed explanation about independent versus dependent clauses. Instead, I let the student bask in the realization that the written word and the spoken word are not so different after all, and I watch her revel in the empowerment that she knew the rule all along. She has just met with a grammatical concept, effortlessly understood it, and could personally identify with the material. The student's realization of her understanding was a huge anxiety crusher. In fact, not only can this kind of implicit learning reduce anxiety, but (at least early on in the semester) explicit instruction and feedback can actually enhance

anxiety (Nakagawa & Leung, 2019). While I may warn the student that we will revisit fragments in more complexity later, I reinforce that she already has some knowledge, making going forward far less intimidating.

Some argue that the deviation from using explicit instruction, at least where grammar is concerned, is detrimental (Andringa et al., 2011). This is a reasonable concern because students also benefit from explicit instruction (Young-Davy, 2014). However, what is so often overlooked is that once a student begins to achieve greater levels of writing ability, her confidence carries over to new, related concepts, and she is better able to assimilate new knowledge that is partly or wholly explicitly taught. In other words, implicitly learned knowledge primes future, explicitly learned knowledge (Lichtman & VanPatten 2021). Therefore, explicit learning still gets some limelight, as it should.

Aside from reducing anxiety, priming can help students with recall limitations (Maddox et al., 2019). One example is when I teach the rhetorical appeals, I do not tell students what I am introducing. Instead, after looking at a few commercials and identifying what each company wants us to buy, we discuss whether the commercial gave us logical reasons and evidence to buy the product, whether there was any information about the company's credibility, and whether the commercial had an emotional impact. Importantly, I do not give any explicit instruction about rhetorical appeals whatsoever. We stay completely in the realm of the familiar and the effortless. In the next class, I provide an explicit lecture about the types of rhetorical appeals. I also reiterate that the students already know the concepts but simply are learning the names associated with the rhetorical devices they already understand. This puts them at ease because they see that the concept of rhetorical appeals is not a mysterious, unconquerable beast. Rhetorical appeals are a bit complex to be sure, but once the general ideas have already been grasped, there is a steadiness as we delve deeper. This anxiety reduction may contribute (at least partly) to the enhanced memory recall of the material—shown to be a marked effect of priming. After all, I remember far more when I am relaxed and confident about what I am learning.

Emulation is also an extraordinary tool to foster implicit learning. Emulation involves giving written feedback (about grammar or content), while emulating the concept. For example, if I see a sentence in a student essay, "I am usually quiet, however that day I was talkative," I may write: Be careful when you

use the word "however." You should start a new sentence after "quiet" or else you will have a comma splice. Although it seems like "however" functions as a conjunction word like "but," it actually starts a new sentence. It does show contrast like "but." However, it does not serve as a contrast conjunction word like "but" because it cannot combine two sentences.

I have given explicit instruction and an example—without the student recognizing she has absorbed the example. Once the student is farther along in the semester, I will write something like this: You have three comma splice errors in this paragraph. They all involve the use of the word "however." Your content in this paragraph is amazing. However, if you don't correct these comma splices, you will hurt your ethos (and lose points!). With emulation, students more readily understand our feedback (Khadawardi, 2020) and with each new concept grasped, confidence eats

away at their writing anxiety. Developmental English students stand to benefit greatly from implicit learning. Incorporation of implicit learning in the classroom is simple. The largest roadblock is the conception that explicit learning is the only tool necessary for success. Because of my own experience and because of mounting data in favor of implicit learning, I have begun to introduce more implicit learning techniques, and as such, I have seen continually improving academic performance. With continued research into the complex ways in which we learn, perhaps educators can utilize more implicit learning tools that will guiet our students' anxiety and give them the well-deserved confidence they need to move forward successfully with their next class and beyond.

Every type of student stands to benefit because implicit learning can change perceptions drastically, allowing students to move forward more confidently in their academic careers.

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Exploring Culture, Acknowledging Stereotypes

Keith Vyvial

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ontemporary students are increasingly entering college from diverse cultural backgrounds and with a myriad of identities, experiences, and perspectives. Educators, and especially educators that teach within the field of developmental education, must possess a comprehensive understanding of the range of challenges that their students encounter as the college years provide students with numerous opportunities for growth and development. Unfortunately, value in the varied characteristics of diverse student populations, especially for students that are most at-risk for college success, is often neglected, especially as it has a bearing on inclusion and equity (Hadley & Archer, 2017).

In my developmental writing courses, I often encounter students from diverse cultural backgrounds. I have observed that many of these students often see themselves differently from others, which may lead to negative perceptions of themselves. Students' negative self-perceptions are often internalized in the form of weak self-efficacy; thus, they may avoid challenging tasks, believing difficult tasks are beyond their capabilities (Cherry, 2020).

Students who are deficient in their own confidence to successfully perform a task are more likely

give up, avoiding the task altogether (Bandura, 1997; Stankov et al., 2014). This can be especially true for students enrolled in developmental education, as a large number of these students do not complete their coursework or programs (Bailey, 2009).

As an English instructor, I have witnessed the prevalent problem of weak self-efficacy among students enrolled in developmental writing. For support, I strive to empower my students from all sociocultural backgrounds. My personal classroom teaching experiences indicate that helping students recognize and appreciate differences—among themselves and others—has a grounding effect on the promotion of these concepts of inclusion and equity; it promotes the ideas that students are not as different or as much of an outsider as they may initially think, which in turn helps students to build their self-efficacy. (For more on creating and building inclusive classroom and teaching environments, see Mahlo, 2016).

One assignment that I have created to address this theme is focused on helping my students learn about culture and subsequent stereotypes. First, I provide class time on the topic of culture in open conversation. I ask students what this word means to them, and then I provide a basic definition: "The characteristic features of everyday existence (such as diversions or a way of life) shared by people in a place or time" (Merriam Webster Online, n.d.). My students are then able to explore the idea that each individual is actually part of many cultures, more than they would initially have considered. Religion or race/ethnicity are what so often comes to mind, but students are encouraged to dig deeper and explore those lesser-known cultures they may belong to, such as people who wear glasses, people who have red hair, people who are in a developmental reading and writing class. Discussion then opens to students talking about the unique cultures they belong to and what those shared characteristics may be.

Finally, the conversation turns to stereotypes faced within these various cultures. It is eye-opening for many students to learn that even those they might not consider being viewed through wrong assumptions and prejudicial stereotypes are, in fact, wrongly judged. My students come to understand that every single person may be seen incorrectly in some way. I continuously emphasize that these incorrect stereotypes must not influence their academic motivation because they do not define a person's social or academic identity (Daoud et al., 2018).

Each student is then given the task to interview someone else to learn about that individual's culture or cultures. They discover what it truly means to be a part of those cultures, including what false

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Keith Vyvial, Professor of English, Alvin Community College 3110 Mustang Road | Alvin, Texas 77511 Email: KVyvial@alvincollege.edu stereotypes are placed on them. I then assign students to write a brief essay on their discoveries. The ultimate goal is for my students to come to a cognitive self-awareness that they are not defined by stereotypes and thus should not define themselves in this way.

The end-of-semester qualitative course feedback suggests that this assignment has been tremendously valuable in the development of critical thinking as well as greater social awareness. Students have suggested that the ideas they explored around culture and stereotypes are easy to follow even though they had never considered these concepts before, at least in this manner. Completing this assignment has allowed my students to view their own roles as both unknowing abusers and victims of false stereotypes. Furthermore, the class discussions and assignment have reinforced my intended goal of helping students become aware that they all have unique characteristics that can be used to their advantage in sharing observations and experiences that others might not be aware of. In turn, students were opened up to an increased sense of ability for success. They learned that they may have challenges, possibly even unique or significant challenges, but also that their differences from other students may also become an asset.

My personal classroom teaching experiences indicate that helping students recognize and appreciate differences among themselves and others—has a grounding effect on the promotion of these concepts of inclusion and equity; it promotes the ideas that students are not as different or as much of an outsider as they may initially think, which in turn helps students to build their self-efficacy.

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