

History of Supplemental Instruction-PASS: The First 25 Years

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Preparing to attend the 50th anniversary of SI-PASS at the 2022 Toronto Conference has brought back a flood of memories of my time at the University of Missouri-Kansas City (UMKC) with the National SI Center (it would become the International Center after my departure). I remember the wonderful colleagues that I worked with in Kansas City, the U.S., and colleagues around the globe. This article is my attempt to share some about my involvement with SI and the history of the movement during the first twenty-five years. I will share what I know of the history through my departure in 2021. Dr. Glen Jacobs then assumed leadership of the Center for Academic Development (CAD) and the SI Center which was hosted by CAD after I departed for new adventures at the University of Minnesota.

My Involvement with the National SI Center

As I joined the UMKC staff in 1989, May Garland retired who served as the first SI Center Director. I assumed her responsibilities as National Project Director for SI along with other duties within CAD directing a dozen other grant programs and operating units. Over the years, my SI roles included conducting national research studies, serving as author or coauthor with Dr. Martin on a host of SI publications, resubmitting the federal SI funding grant, leading the team that revised the SI training curriculum, served as a co-trainer for the SI Supervisor workshops, liaison with the SI Certified Trainers, and made SI awareness presentations at over a hundred conferences. When I arrived at UMKC, we were hosting one SI Supervisor workshop each year. By the time I departed, it was six workshops hosted in Kansas City and the SI Center staff were conducting training workshops around the U.S. and the international SI Certified Trainers were doing the same around the world. While I worked at UMKC, there were a dozen Certified Trainers in the U.S. and numerous ones in Australia, South Africa, Sweden, and the United Kingdom who hosted their own training workshops, wrote publications, conducted research, and made conference presentations.

After the departure of May Garland, the UMKC staff charged with leading the SI Supervisor workshops included Mary Gravina and Dr. Kim Wilcox who also made conference SI presentations and provided technical assistance to the colleges in the U.S. that had adopted the SI model. In addition, Dr. Wilcox served as editor of the *SI Newsletter* distributed to all SI programs. Other UMKC CAD members served as co-trainers for the SI Supervisor workshops as well. This was in addition to their regular responsibilities in CAD for their operating units which were hosted in CAD.

Deanna Martin was a leader, teacher, mentor, colleague, and my friend. Throughout my career, I have often reported to female supervisors. These relationships have been wonderful opportunities for mentoring and teaching. On a daily basis, Deanna and I

had conversations about SI, learning assistance, new pedagogies for teaching and learning, new ways of meeting the needs of the worldwide SI community, and so much more. Deanna was the creator of the SI model, the later Video-based Supplemental Instruction (VSI) model, and other programs within CAD. How do you describe working for the legend? We were both strong-willed individuals with the energy to debate each other. In the end, the debates brought forth better ideas. My writing skills improved vastly through the collaborative publications we co-authored (Martin & Arendale, 1993), grant applications, and the endless reports required by UMKC and the federal government. As I look back over my career, UMKC and the mentoring by Deanna were the defining forces in my life for everything that happened afterward at the University of Minnesota (UMN) and my other professional organization projects.

After my time with CAD and the SI Center, I accepted a tenure-track assistant professorship at the University of Minnesota. I had previously said during SI Supervisor workshops that the SI program could be embedded into the classroom by the instructor. Now I had that opportunity as a global history professor at a research university. I built into the curriculum practice a variety of SI session strategies so that the students could acquire those skills for use in my and other college courses. I published widely on my experiences as a classroom instructor that embedded best practices of SI into the curriculum. I also kept up my research in peer learning programs such as SI and published an annual annotated bibliography of SI publications (Arendale, 2021). I also helped to start a hybrid form of SI at UMN. I conducted research about that program and published many publications as a result. My connection to SI is deep and has been personally rewarding. I have fond memories of my time with the SI Center at UMKC and the lessons learned.

The History of SI: The First 25 Years

This is a story of the first 25 years of Supplemental Instruction-PASS. This history is based on conversations with Dr. Deanna Martin, Dr. Robert Blanc (Deanna's collaborator and husband), Vice-Chancellor of UMKC Student Affairs Gary Widmar, Department of Education Regional Administrator Clark Chipman, SI staff within the University of Missouri-Kansas City, SI-PASS Certified Trainers from the U.S. and around the world, and my own personal observations as a member of the UMKC SI team. Much of this history was previously published in book chapters (Arendale, 2002; Widmar, 1994). It was an amazing time to witness the birth and development of SI and be involved with others for sharing it around the globe.

Reason for Creation of SI

SI was created at the University of Missouri-Kansas City (UMKC) in 1973 as a response to a need at the institution created by a dramatic change in the demographics of the student body and a sudden rise in student attrition. UMKC was formerly the University of Kansas City (UKC), a small, private university founded in 1930. While UKC was in an urban area, its private status only permitted academically well-prepared students to be admitted. In the early 1960s, UKC fell upon hard financial times and made itself available for purchase by the State of Missouri. After the University of Missouri system purchased UKC in 1963, there was a dramatic change in

the student body. Besides reducing the academic selectivity of the student body, the institution quickly grew through the acquisition of independent professional schools of law, dentistry, pharmacy, and a conservatory of music. While the undergraduate body had a lower level of previous academic achievement than before due to the less selective admissions criteria, the same faculty who had high academic expectations for students from the UKC era continued to teach at the institution. As a direct result of a growing mismatch between faculty academic expectancy and student academic capability, attrition at the institution quickly increased from 20 percent to 45 percent.

Role of Dr. Deanna Martin with Creating SI

Rather than choosing the traditional course taken by many institutions during the early 1970s to offer remedial classes or provide a centralized LAC, UMKC chose another approach. Well before the trend in some areas of the country during the 1990s that have prohibited developmental or remedial education courses at public four-year institutions, the University of Missouri system had already prohibited such courses in the 1970s. Another delivery system for learning assistance and developmental education was required to meet student and institutional needs. Gary Widmar, Chief Student Affairs Officer, hired Deanna Martin, a then-doctoral student in reading education, in 1972 to work on a \$7,000 grant from the Greater Kansas City Association of Trusts and Foundation to solve the attrition problem among minority professional school students in medicine, pharmacy, and dentistry. Martin used her knowledge from her recent graduate studies along with a national survey of learning center directors to identify common concerns with traditional approaches to helping students: services were ancillary to the institution; standardized tests were insufficient to predict students that needed assistance; services were often provided too late for help to students; students did not have time nor money to enroll in additional developmental courses; students displayed difficulty in transferring study strategies to the academic content courses; individual tutoring was expensive; students often did not avail themselves of services for fear of being stigmatized, and evaluation of learning services was inadequate.

The need for a different approach was presented in 1972 when an apparent paradox was encountered at UMKC, namely how to reduce student attrition when there is negligible funding for the creation of a comprehensive LAC and the faculty will permit neither remedial nor developmental coursework? This was the paradox created by the University of Missouri-Kansas City university-wide retention committee in 1972. Although members of the university-wide retention committee were keenly interested in improving student persistence, resources were scarce. Faculty members on the committee argued that any available funding should go directly into the departmental budgets because they were the ones who had regular, sustained contact with the students in the classrooms. Generally, faculty believed they were best equipped by training, by intellect, and by academic commitment to meet student needs. The administration countered by pointing out that giving departments funding for teaching improvements and tutoring had proved unproductive; attrition statistics remained appallingly high. The faculty parried by arguing that if the administration would only recruit better students, the discussion would be moot. The committee's only area of

agreement was on the need to evaluate rigorously any future effort to support student learning on the campus.

Dr. Martin Proposed a Bold, New Approach

Deanna Martin proposed a plan that appealed to the UMKC retention committee on several grounds. First, SI as she proposed it, could be evaluated in terms of reduced attrition and grade improvement in core curriculum courses. If the percentages of top grades rose in courses where SI was provided, and if D and F grades and Withdrawals fell, it might be reasonable to infer that SI had made a difference in an otherwise stable course. Secondly, the committee suggested controlling for several potentially confounding variables: motivation, professor, the type of exams, textbook and assigned readings, grading standards, and various academic and demographic factors. Thirdly, the committee wished to avoid an implication that student support was remedial. They recognized that SI would not be perceived in those ways if the SI program in each course began well before the first examination scores were recorded and if SI were open to all students in the class on a voluntary basis. Fourthly, faculty were attracted to SI because of the small fiscal commitment to the pilot program and because it required a minimum of faculty time. Finally, they liked the idea that SI would promote independent learning by the students.

Martin successfully pilot-tested what would become Supplemental Instruction in 1973 during a human anatomy class at the UMKC School of Dentistry. Additional grant support was gained from the U.S. Department of Education (USDOE) Health Careers Opportunity Program (\$447,685 funded from 1976 to 1980) and the Greater Kansas City Association of Trusts and Foundations (\$180,000 funded from 1977 to 1979) to expand the SI program. With this significant financial support, SI was used successfully in a variety of courses in the professional schools of dentistry, pharmacy, and medicine. The SI program was then implemented at the undergraduate level in 1981 after its success with the rigorous courses in the health science professional schools.

Similarity of SI to the Community Health Model

Another way to look at the paradigm offered by SI is through an analogy of comparing a traditional medical model of treating a patient as opposed to a community health model that makes systematic changes in the environment that positively influences all individuals. Traditional individual tutorial practices during the time that SI was created in 1973 may be described as following a medical model: an individual is identified as needing professional assistance based on prior academic performance and diagnostic testing; self-referral in response to perceived symptoms; or referral by another professional in response to observed symptoms. The developers at UMKC found that several assumptions of the medical model either did not apply or were not practiced in their institution.

The traditional model relies on the identification of the high-risk student, the student who is deemed to be deficient or at-risk in some way. Such pre-matriculation identification was very difficult. First, entering students must be known to the faculty

and staff in time for key personnel to establish contact with at-risk students. Second, it must be noted in this context that neither prior performance nor standardized testing is sufficiently reliable as a prediction criterion of who is and is not at risk. As many as 50% of those whose prior scores suggest they are at risk prove to be successful without intervention, and many of those who are not identified in this manner proves to be unsuccessful. Analysis of high school grades and standardized college entrance examinations do not identify all students who will drop out of college for academic reasons. Rather than pursuing the traditional medical model, the SI program is more analogous to a community health model. In this model, the focus is shifted from individuals to the environment in which they live and work. An example of this shift is the widespread use of free or reduced-cost inoculations against childhood diseases. It was less expensive and more effective for all children to receive the inoculations than to spend enormous amounts of public tax dollars treating the diseases that would come later to a few individuals. The community health model requires the policymakers to make changes in the living environment rather than placing the responsibility or blame upon the individuals. This shift eliminates blame from anyone and instead puts the focus on developing a systemic solution that is proactive before problems occur.

Starting SI at the Graduate School Level was Enormously Helpful

The choice to implement SI at the graduate and professional school level was made since that was the area identified by the UMKC retention committee and substantial grant funds were available. Beginning with students who were most viewed as the most academically elite at the institution and providing an academic intervention that improved their academic performance brought tremendous credibility to the fledgling SI program. The status given to the SI program due to its success with the elite health science schools provided credibility for its implementation with the undergraduate courses. Based on the elitist culture held by many UMKC faculty members, most of whom were holdovers from the UKC era, if SI had first been implemented with first-year classes the program might have never been used with the graduate and professional schools who often viewed their students as different and better than the rest of the institution. It would have been easy for many faculty members to have dismissed SI as something designed for less able students and not appropriate for the premiere, highly selective students. Part of the universal appeal of the SI program is the academic improvement for students from a wide range of academic ability levels and course content areas.

The First College to Adopt SI Outside of UMKC

In 1979, the first institution to implement the SI program and continue to operate was Bethel College in North Newton, KS. It was started by Dr. Sandra Zerger, later to be selected as a Certified Trainer. She received permission from the USDOE to revise a recently awarded Title III Strengthening Institutions grant by redirecting funds from a tutoring center and instead fund a pilot SI program. Eventually, Dr. Zerger would join the UMKC SI Center to conduct research, develop training materials, and assist with training workshops. Since formal training workshops and curriculum materials had yet to be established, Deanna Martin and staff from UMKC drove over to Bethel College,

located in central Kansas, and consulted with Zerger as the pilot SI program was started.

Controversy over the Name of this New Program

The original name for the program was Supplemental Course Instruction. Several years later the name was shortened to Supplemental Instruction. This had been the predominant name of choice by most U.S. institutions. The name was never meant to imply that additional knowledge or instruction was to be supplied by the SI leader. SI sessions have always been structured to review what was presented in the previous class lectures and assigned material from the textbook. The UMKC SI staff has considered other names, but they decided to stay with SI since it had such a large body of professional literature. However, other names have been used outside the U.S. due to political or practical reasons.

In the United Kingdom (UK) the more common term was Peer Assisted Learning (PAL). This name was used since it avoided the appearance that SI was a competing form of instruction with the institution's full-time faculty and staff members. At most UK institutions there are full-time professional tutors who work closely with the course instructors in the delivery and review of the content material. SI had to be carefully positioned so as not to seem to compete with the professional tutors. Deanna Martin met with national education labor representatives to clarify the role of the SI program and how it enabled students to be more prepared for the tutorial services and class lectures. Even after these informal negotiations were resolved to the satisfaction of all parties, the name of the program was still potentially confusing. The UK educators who were interested in SI developed an alternative name for the program, PALs. In Australia the term of choice by many who have implemented the SI program is Peer Assisted Study Sessions (PASS) or Peer Assisted Study Schemes (PASS). Both PALs and PASS emphasize the fellow student collaborative focus of the groups. The choice of using the word learning in the PALs name reflects an important emphasis of what occurs during the study sessions. A few times SI is named Academic Mentoring, Peer Mentoring in Praxis (PMIP), Academic Peer Mentoring Scheme (APM), and simply Peer Mentoring. Today the name "SI-PASS" is more often used to display an inclusive recognition of the predominant names used globally.

An Accidental Meeting Leads to National Dissemination

In 1978, a chance meeting in Washington, D.C. was pivotal for the eventual national and international dissemination of the SI model. Up to this point, the SI program prospered on the UMKC campus, and information about it had been shared through several conference presentations, individual consultations, and a self-produced manual eventually made available through ERIC, the online document sharing service of the U.S. Department of Education. A few schools in the Midwest had started their own pilot SI programs. At a federally-sponsored elementary and secondary education conference held in Washington, D.C., Deanna Martin and Clark Chipman met and talked about SI. Chipman was a regional administrator for the U.S. Department of Education (USDOE) with responsibility for higher education programs. He was very interested in education programs that promoted academic achievement for college

students, especially those from first-generation and academically or economically disadvantaged backgrounds. After their short meeting in D.C., Chipman arranged to meet with Martin while he was in Kansas City for another event the following month. During their lunch meeting in Kansas City, both shared their interests in helping address the attrition problem for higher education students. Martin talked about the application of Piaget's learning theory for college students. Chipman shared her enthusiasm and encouraged Martin to learn more about the National Diffusion Network (NDN) under the Office of Educational Research and Improvement of USDOE.

The NDN was a nationwide system created in 1974 with a modest \$14 million annual budget to improve American education through the implementation, in local schools and other settings, of rigorously evaluated, effective education programs. Developer Demonstrators (DDs) are locally developed effective educational projects validated by a federal panel of program evaluation experts. Approximately 450 DDs were validated by the NDN over a period of twenty years, of which approximately 25% received USDOE funds to nationally disseminate their programs through training workshops, awareness presentations, publications, and technical assistance. NDN validated programs were used by nearly five million schoolchildren annually in 80,000 classrooms in 32,000 U.S. schools. Rather than requiring each school to reinvent the wheel, the NDN sought to validate locally-developed practices and provide funds for national dissemination. The estimated investment to develop an NDN practice was \$400,000 while the cost to adopt the practice by another school was approximately \$1,000 (National Diffusion Network, 1993). Chipman encouraged Martin to collect data and submit an evaluation study for the review of the Joint Dissemination Review Panel (JDRP) of the NDN to seek validation as an Exemplary Educational Program and to become a DD. The JDRP was the program evaluation unit within NDN. This designation by NDN for USDOE would be critical for attracting more national attention since it was an external validation of the efficacy of the SI program for improving student achievement. It would also permit the SI program to seek funding from USDOE to support the national dissemination of the program to other peer institutions in the U.S. Three areas were evaluated by the JDRP: convincing results of effectiveness, appropriate and rigorous program evaluation design, and potential for replication at other institutions (Ralph & Dwyer, 1988). UMKC submitted data from its own program and also several other colleges that had implemented pilot SI program as well. UMKC has collected SI research data from nearly 300 institutions in 7,500 classes with a combined enrollment of nearly a half-million students. These research studies continue to replicate earlier research studies.

In 1981 the SI program received its certification as an Exemplary Educational Program from JDRP. The SI program received validation under two outcome areas. Claim Type 1 was for improved academic achievement. This was demonstrated by higher final course grades by SI participants in the targeted classes. Claim Type 2 was for improved student attitude and behaviors. This was demonstrated by lower withdrawal rates from the targeted classes and higher rates of persistence toward graduation by the SI participants. SI was the first program certified by the USDOE as contributing to increased student academic achievement and persistence toward graduation of

college students. The SI program was reevaluated and successfully recertified by the JDRP and its successor, the Program Effectiveness Panel (PEP), in 1985, 1988, and 1992. Due to federal budget cuts during the mid-1990s under the Clinton Administration, the NDN and the PEP was eliminated and so were opportunities for recertification and funding for dissemination activities from USDOE.

Role of a Prestigious Publication and National Funding

While many SI-related publications have been written by staff from UMKC, a major article was published in 1983 that would prove critical for future dissemination activities and validation for the wider education community. The *Journal of Higher Education* in that year published *Breaking the Attrition Cycle: The Effects of Supplemental Instruction on Undergraduate Performance and Attrition*. This was published in 1983 by Robert Blanc, Larry DeBuhr, and Deanna Martin. This article gained public and professional attention for the SI program outside the circle of developmental education.

In 1984, federal funds were provided through the NDN to support the national dissemination of the SI model to other campuses. Nearly \$900,000 would be received from the agency to support these efforts. The initial application to NDN was not funded in 1982. Clark Chipman continued to monitor the SI program at UMKC and learned of the funding decision from Martin. Chipman followed up with the Lee Wickline, NDN Director, after this initial funding refusal. Part of the reason cited by Wickline for denying the funding was that the NDN had focused its funding priority on education practices at the elementary and secondary level since there were few NDN-approved higher education DDs. Chipman then contacted Gary Jones, Undersecretary of Education, about this incongruity between NDN authorization to apply for funding and a lack of funding authority for higher education programs. Within an hour of the conversation with Jones, Chipman received a telephone call from Wickline assuring that a critical review of NDN approved higher education proposals would occur during the next funding cycle. The first year of NDN funding for SI dissemination to UMKC was provided in 1984 (C. Chipman, personal communication, August 27, 2001).

Until the NDN agency demise due to federal budget cutbacks in the mid-1990s, USDOE provided nearly \$800,000 to UMKC over a decade to support national dissemination. When federal funds were cut, UMKC raised the revenue necessary to continue national and international dissemination by charging moderate fees for attendance at the three-day SI Supervisor Workshops that are held by the University nine times each year in Kansas City with many other ones conducted around the U.S. and in other countries. May Garland from the Center directed the early dissemination efforts and managed the USDOE grant.

Role of the SI Certified Trainers

To expand efforts by UMKC staff with dissemination efforts, a group of Certified Trainers (CTs) were established in the U.S. and other countries. The CTs were invited by the UMKC staff to conduct SI Supervisor training workshops and provide consulting services to institutions in their geographic area. Each CT had already established a

thriving SI program on their home campus and had institutional support to help other colleges to successfully implement SI. Up through the year 2001, more than a dozen faculty members or administrators from institutions in the U.S. and colleagues from Australia, South Africa, Sweden, and the United Kingdom were selected for both this honor and service. Each was selected for their expertise and area of interest. For example, Dr. Julia Visor from Illinois State University enriched the SI network through her skill with SI as it was combined with knowledge of TRIO programs and expertise with research, especially in affective domain variables. The first CT outside the U.S. was Jenni Wallace from the United Kingdom (UK) who has combined her expertise in SI (PAL) along with institutional quality measurement and instructional improvement. Through her leadership, nearly fifty UK institutions implemented SI and the UK PAL Network hosted annual PAL Leader and Supervisor conferences.

After my departure in 2001, formal relationships were developed between the International Center for SI at UMKC with the European Center for SI and PASS at Lund University, Sweden; Canadian National Center for SI at the University of Guelph, Ontario, Canada; SI National Office Southern Africa, Nelson Mandela University, South Africa; Northern South Africa Regional Center, North-West University, South Africa; and PASS and SI Australasian National Center, Griffith University, Australia.

Conclusion

The first quarter-century ended first with the retirement of Dr. Martin and a few years later with my recruitment by the University of Minnesota for a tenured faculty research position. Dr. Martin continued her global connections with the international SI community through periodic trips to SI centers in other countries, nurturing VSI programs to provide access for underrepresented students, and other philanthropic ventures through her education foundation. In addition to my work as a UMN faculty member with a variety of research projects related to equity, student achievement, and learning assistance, I also worked with several organizations. I founded the Best Education Practices Clearinghouse through the Educational Opportunity Association to highlight practices that were helpful for first-generation college and historically-underrepresented students. In recent years, I founded the Colleagues of Color for Social Justice which focused on the intersection of race and social justice with equity programs for marginalized student populations. For Deanna and me, there really was no such thing as retirement. Those are stories for another publication.

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