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*This chapter offers a case study of the Nelson Mandela Metropolitan University, South Africa, where SI has acted as more than a student academic development program by also addressing faculty and curriculum development.*

## How Supplemental Instruction Benefits Faculty, Administration, and Institutions

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Supplemental Instruction (SI) was born in an era when new students—different from traditional students—were being admitted into the academy. Many of these students were not suited to the prevailing educational delivery—two lectures and a lab—according to Postlethwait (2005). Furthermore, the world has changed in the last thirty-five years. Camblin and Steger (2000) state that accelerated technological advances and globalization, along with fewer financial resources, have created an environment of discord in higher education. In addition, students and parents increasingly demand accountability and high quality in higher education. Colleges and universities must address the learning needs of students in the information age or face obsolescence. Faculty development programs are crucial for keeping education relevant. This chapter explains how a successful SI program can support not only students but also the faculty and the institution itself.

### Benefits to Faculty

Faculty development must move beyond providing funds for sabbaticals and academic discipline conferences to focus on teaching effectiveness and methodology (Lawler and King, 2000). According to Camblin and Steger (2000), the assumption has been that scholars (faculty members) can easily

self-educate to stay up-to-date on their own and maintain high teaching skills. But this assumption no longer holds in the information age. Today's workers must acquire and use theoretical and analytical knowledge in increasingly sophisticated ways. Knowledge has become so complex that no single individual can be effective alone; employees can be successful only if they collaborate in teams. According to Weaver and Sorrells-Jones (1999), organizations need "to become increasingly flexible and resilient to support innovation and to change quickly in response to market demands. The preferred model is an organization made up of teams" (p. 19). Team members can challenge and correct each other (Sorrells-Jones and Weaver, 1999). Faculty members who were educated based on the individualistic industrial age model benefit from SI training in collaborative techniques.

Many faculty equate good teaching with knowing the content and delivering it well, based on good lecture notes (Brent and Felder, 2000; Camblin and Steger, 2000; Caffarella and Zinn, 1999). For them, improving teaching is equated with revising their lecture notes (Brent and Felder, 2000). Scholarship, or research, is viewed as a means to obtain tenure and promotion. Boyer (1990) argues for a broader definition of faculty scholarship, moving beyond research and publication as the yardstick. He quotes Clark Kerr: "The university is being called upon to educate previously unimagined numbers of students . . . to adapt to and rechannel new intellectual currents" (cited in Boyer, 1990, p. 53). He broadens the definition of scholarship to include the scholarship of discovery (creating new knowledge—the traditional view of scholarship), the scholarship of integration (making connections across disciplines), the scholarship of application (applying knowledge to consequential problems), and the scholarship of teaching (transforming and extending knowledge to students).

Boyer asserts that the scholarship of application and teaching benefit the academic institution by helping it meet its service obligations. In order for there to be scholarship of integration, departments must overcome the disciplinary isolation characteristic of many institutions. Because SI personnel are trained in collaboration and their educational backgrounds span many disciplines, they can provide leadership for collaborative scholarship. SI has always excelled in the application of theory to practice. Leaders and supervisors are trained to make the abstract concrete, to provide application problems and situations for theory presented in lectures. SI constantly works on improving learning and teaching and is obliged to further the scholarship of teaching. SI, consequently, is well suited to meet the needs of the broader definition of scholarship.

**Informal Faculty Development.** Faculty may view faculty development as remedial—strictly for those who do not know how to teach or research (Boyle and Boice, 1998). They may not perceive a need to improve, not be aware of their teaching problems, overestimate their teaching strengths, or underestimate the usefulness of the teaching methods they use, especially before they participate in faculty development programs

(Skeff and others, 1997). Faculty may have a narrow view of faculty development and define it only as monies for conferences and publications (Eleser and Chauvin, 1998). For such faculty, development may need to be informal. One should never underestimate the value of talk over a cup of coffee. When a coordinator (director of a program) or a supervisor (observer or mentor) shares a successful matrix or one-minute paper observed in an SI session informally with the course faculty member, he may find these successful learning strategies incorporated into that faculty member's class the next term.

In their weekly meetings, SI leaders and faculty provide feedback to one another on the most difficult content, why it is difficult, and what strategies will help students better understand it. Faculty appreciate feedback from leaders on the questions and difficulties students are having. Too often they hear such feedback only at the end of the term, when it is too late to make changes for that group of students. SI personnel are trained in processing content, facilitating group work, and developing curriculum. Through conversations with faculty they share these ideas. The most expert faculty realize that they must not only know the content but also know how to make the content understandable to all their students.

**Formal Faculty Development.** Formal faculty development reviews the role of theory in informing teaching practices. DiPardo and Sperling (2005) argue that expert teachers embrace learning about their teaching; they "tend to regard each new insight as a means toward further inquiry, theory assuming the role of provocateur, stimulating the thinking of all of us who seek to better understand the teaching-learning process and to plot our own context-specific strategies" (p. 138).

As economic pressures on institutions increase and legislators demand more accountability, institutions have begun putting measures in place to improve teaching and learning (Centra, 1982; Eble, 1983; Brookfield, 1990). Attempts to improve teaching include student evaluations (Coleman and McKeachie, 1981), university and grant-funded faculty development projects, workshops, seminars, and formal coursework or advanced degrees.

SI coordinator and supervisor training workshops often include teaching faculty. According to feedback from the trainings, these faculty, who help with the observation and mentoring of leaders, appreciate observing the modeling of learning strategies and practicing them in the simulations (Rosenthal and Bandura, 1978). These trainings help faculty learn new pedagogy, understand active learning and collaboration, and produce good ambassadors on campus for SI.

Increasingly, the International Center for Supplemental Instruction housed at the University of Missouri-Kansas City (UMKC) provides faculty development workshops. These customized workshops review topics such as learning theory, successful learning strategies, conducting qualitative and quantitative research on SI, developing leadership skills in leaders, clinical

supervision in SI, negative stereotypes that reduce student achievement (Steele and Aronson, 1995), and assessment and evaluation. In typical faculty development programs, these topics may be discussed but seldom modeled and experienced in depth as they are in SI trainings.

Caffarella and Zinn (1999) and McKeachie (1999) argue for institutional structures that promote faculty development, such as collaboration and collegiality. SI is built on collaboration with faculty in the development of enhanced curriculum, especially in video-based supplemental instruction and interdisciplinary courses. SI supervisors are helpful resources because they are trained in group processing, differentiating important concepts from difficult concepts, and matching learning strategies to content. SI personnel who are integrated into faculty development committees or teaching and learning centers provide valuable expertise to the academy.

Thirty years ago, one could count the number of SI coordinators and supervisors with graduate degrees on one hand. Increasingly, SI programs hire SI staff or provide incentives for them to earn advanced degrees. Such educational credentials not only provide staff with an increased learning base but also provide them with increased credibility in the profession and in regard to the faculty. The University of Missouri-Kansas City has begun a graduate program with SI as a main component to further develop professionals in academic support services.

## **Benefits to the Administration and to the Institution**

Ultimately, administrators and institutions benefit when students learn and when budgets are balanced. SI contributes to both goals.

**Student Benefits.** When students attend SI regularly, they learn the material more effectively and their grades improve. When students learn more, they tend to stay in the discipline of their choice, reenroll, and persist to graduation. Moreover, they report that they are more satisfied with their courses, even if the faculty do not change their style of teaching the courses. Consistently, research on SI has validated these findings over more than thirty years.

**Economic Benefits.** The cost to help each student is less than for many traditional support services because SI academic support is not one-on-one. It is helpful for institutional budgets because student retention rates are higher. SI also provides faculty development both indirectly and directly. According to Johnson, Johnson, and Smith (1991), faculty instructional productivity improves when faculty development is integrated into the institution. Participation in SI provides faculty with experiences in collaboration and collegiality, modeling effective learning strategies, and a sense that they can make a difference in the lives of students. According to Brent and Felder (2000) and Boyle and Boice (1998), faculty development that includes mentoring, observation, and supervision greatly decreases the time those faculty need to become effective teachers and full, productive members of the institution. SI provides mentoring for women and minorities, the very faculty

who are often marginalized in traditional faculty development programs (Brent and Felder, 2000; Boyle and Boice, 1998).

Overall, SI provides both successful participant faculty development and budget benefits, and it promotes the service component of the institutional mission.

### **Case Study from South Africa**

Currently, higher education in South Africa faces many challenges. The merger of South African Higher Education institutions has brought about a state of flux and uncertainty for staff and students alike. In the midst of this flux, higher education institutions are pressured to widen access, which results in the admission of students who are underprepared for higher education. Simultaneously, the funding formula for government subsidies has been adapted and funding is no longer based on the number of students enrolled, but rather on student retention.

**SI as Catalyst for Change.** Supplemental Instruction has become a catalyst for change and a vehicle for transformation in South Africa. Students have the opportunity to raise their concerns and needs in sessions, and the SI leaders in turn report these issues to faculty and administrators. This feedback loop has given the students a voice and raised awareness among faculty of the importance of addressing student needs in order to ensure retention.

The University of Port Elizabeth (UPE) embarked on its transformation process in the early 1990s. UPE was originally established under the apartheid system and was mainly oriented toward the needs of the white community. During the transformation process, there was recognition of the need for the transformation of student academic development.

The director of the Centre for Organizational Development (COAD), André Havenga, implemented SI as the catalyst for transformation. According to Wlodkowski and Ginsberg (1995), when students use the principles of peer-facilitated learning (such as SI) in an environment in which they feel safe and respected, they will concentrate and use their imagination and exert more effort in their studies. SI is also cost-effective and has a proven track record. These successes were advocated to students, academic staff, management, and other tertiary institutions in South Africa. In institutions where commitment to the program was lacking, SI was not very successful (Hillman and McCarthy, 1996; Smuts, 1996). The research on SI in South Africa indicated that, because of changing student demographics and needs, the traditional SI model did not always address the needs of students (Clark and Mallon, 1998; Nel and Snow, 2003). Adaptations of the SI program came into existence with the assistance of faculty, SI leaders, and SI supervisors. Through these adaptations, SI grew beyond a mere student academic development program. By taking ownership of the program and becoming involved, the other stakeholders acquired skills associated with SI. Therefore, SI had an impact beyond its traditional role.

At Nelson Mandela Metropolitan University (NMMU) and other South African institutions, lecturers attend SI leader training and SI supervisor training on a regular basis. Feedback from academic staff attending these courses indicates that they have adapted their traditional teaching methods and incorporated SI principles into their lectures, using more interactive lecturing methods, which results in more active student participation in lectures. To further complement this transference of skills, many SI leaders have become lecturers thanks to their involvement with SI and the successful relationships they have built with the academic departments in which they served. To date, thirty-four SI leaders at NMMU have taken up lecturing positions there and at other institutions, mainly as a result of their SI experience. They also bring with them a facilitative style of instruction by incorporating their SI strategy skills into their lectures.

Faculty who have been actively involved in SI have also become involved in other academic development-related areas on campus, including academic orientation, the Post-Graduate Certificate in Higher Education (PGCHE), and other initiatives. Many of these faculty members have conducted research not only in their areas of academic expertise but also in academic development.

Faculty who attend SI training realize the need for feedback. The feedback they receive from their students through questionnaires and from SI leaders in meetings and reports result in academic curricula being adapted to incorporate skills development in the context of the discipline. Combined with the quantitative feedback on SI as provided by the SI supervisor, NMMU identified and created a space for faculty development. In cases where adaptation of the curriculum did not serve the purpose, the SI feedback was used to design a new course or initiative that would better address the needs of the students. SI, thus, was integrated into the curriculum design. "Pockets" of SI skills could be found in the curriculum design, constantly informing and interacting with the academic material. The process did not take place instantly, but sound processes were adhered to. The result was a tried and tested curriculum that addressed the students' needs in ways it could not have done before.

Historically, South African students have been enveloped in a "passive, unquestioning, and conventional milieu" (Vorster and Davies, 1994, p. 168). This results in students having a predominantly external locus of control. The success of SI, however, relies heavily on their active involvement. This results in a new culture of learning in students who have come from this relatively passive learning milieu. It creates a challenging academic experience that forces students to draw on their own resources, rather than external resources. Active student involvement in the learning process has led to greater academic success and higher throughput rates, which in turn has lessened faculty stress.

**Six C's of Sustainability.** One of the underlying questions for the survival of the SI program in the contested landscape of higher education is its sustainability. Six factors necessary to its sustainability have been identified: namely the "Six C's of Sustainability" (Clark-Unite, 2004).

First, in order for a program to take root and grow, it is imperative that a credible *champion* be appointed to drive the program. The sustainability of the NMMU SI program owes much of its success to the initial leadership of André Havenga, former executive director of COAD.

*Contextualizing* or *customizing* too is one of the key strategies for sustainability of the SI program. Phrases that come to mind include “adapt or die” and “fitness for purpose.” The success of the SI program in South Africa can be attributed to the manner in which it was adapted and molded to fit the divergent contexts of tertiary institutions. However, before the program was endorsed nationally, the program had to be experimented with at the University of Port Elizabeth to ensure its viability for a South African context. After a few years of development, the program became a flagship, and UPE was granted the rights of the National Office. In January 2005 the former University of Port Elizabeth, Port Elizabeth Technikon, and the Port Elizabeth campus of Vista University merged to become the Nelson Mandela Metropolitan University. The SI National Office, which formerly resided at the University of Port Elizabeth, was allowed to continue within the newly formed Nelson Mandela Metropolitan University based on its sound track record. The SI National Office for Southern Africa consists of a head and a deputy head, both of whom are Certified Supplemental Instruction International Trainers and who are responsible for training SI Supervisors in the Southern African region. They are also responsible for ensuring that the quality of the SI model is retained at these institutions. In addition, they facilitate networking between institutions involved in the SI model and they encourage research of the SI model and its effectiveness within the Southern African context.

*Central funding* is another important factor in sustainability. Without the financial endorsement of the institution, the program is a nonstarter. Financial support demonstrates the institution’s commitment to the program. One of the key successes of the NMMU SI program has been that the university has committed itself to the program by providing central funding and underwriting the financial requirements of the SI National Centre (for example, giving release time for the national trainers to conduct supervisor training).

*Commitment and buy-in* from relevant stakeholders and learners is crucial for the sustainability of the program. Two questions that management frequently ask are, “Does it work?” and “What does it cost?” Havenga’s successful “win-win” response to those management questions was another question: “What would it cost the institution if we do not implement the SI program?” The selling point was that SI contributes significantly to improving throughput rates and thereby increases government subsidy.

*Capacity building and continuity* of staff is another important strategy for sustainability. How do you get the right people onboard? A critical element for the success of the SI program at NMMU has been the emphasis

on leadership development and empowerment. Over the years, experienced SI leaders have taken on the roles of assistant supervisors, supervisors, and assistant national trainers. Currently, the NMMU SI campus program is coordinated by a former SI leader who is also a certified national trainer. Accreditation of SI leaders is also being developed in an attempt to provide an incentive, besides financial, to retain SI staff.

Finally, *critical reflection and renewal* is the last important factor. For “reflective practitioners,” constant evaluation and renewal is important in order to bring about an improvement in practice: identify the problem, plan the intervention, implement the intervention and evaluate the outcomes, and then use what has been learned to inform the planning, and so the cycle begins again. “Action research” is an important consideration for quality assurance, as outlined by the Higher Education Quality Committee.

## Conclusion

To conclude, the benefits of SI at the NMMU have been as follows: ensuring stability during transformation and accommodating the needs of first-generation learners; providing financial incentives in terms of continued enrollment and throughput strategy in response to the government funding formula; and increasing learner satisfaction at the institution with the development of a culture of belonging and the deepening of understanding of what it entails to be studying at a university.

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