Who am I now? Accommodating New Higher Education Diversity in Supplemental Instruction

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ABSTRACT

Supplemental Instruction (SI) has undergone many adaptations over its 35 year history as it has evolved to meet new developments in higher education while still maintaining its "original genetic code" (Martin and Blanc, 1995). During this time there have been some additions to its theoretical base to accommodate these developments. However, this paper contends that recent transformations of higher education challenge the adequacy of this base and call for complementing SI's theoretical base with notions of student learning and literacy as situated social practice. It is argued that SI's suite of principles lacks reference to research in what can be broadly termed "multiliteracies" (New London Group, 1996), which takes account of contemporary higher education now marked by heterogeneity in the cultural, linguistic and age profiles of students as well as the structure and assessment types of the new disciplines they study. The addition of a multiliteracies perspective will equip SI and its leaders to more fully support these new cohorts of students in negotiating the ideologically contested ground of higher education.

INTRODUCTION

Since its inception in 1973 at the University of Missouri-Kansas City (UM-KC), the peer learning program, Supplemental Instruction (SI) has continually adapted to changing contexts in higher education. Video-based Supplemental Instruction (VSI) was the first morphing of the program , and this has been followed by applications of SI to distance education (Couchman, 1999; Couchman, 2001; Couchman and Bull, 1997; Painter, Bailey, Gilbert, and Prior, 2006), whole institutions (Davies, 1995), teaching-learning centres and themed learning communities (Painter et al., 2006), modular programmes (Price and Rust, 1995), medical faculties as TeamSI (Muhr and Martin, 2006), and educational systems of developing countries (Jacobs, Stone, and Stout, 2006). These permutations, though, have all retained the 'original genetic code' for SI: voluntary, out-of-class sessions led by faculty approved student facilitators with content and learning skills mastery trained in peer collaborative learning methods; and student facilitators who support and work closely with faculty, attend all lectures, read all course material, refrain from any role in assessment of students and gather data for supervisors to pass on to UMKC (Martin and Blanc, 1995).

SI's theoretical foundations have generally reflected this variety of expression, drawing upon the widely recognised learning theories of behaviourism, cognitivism and constructivism (McGuire, 2006; University of Missouri-Kansas City, 1995). More recently, it has been noted that SI is also congruent with several interpretive-critical principles (Hurley, Jacobs, and Gilbert, 2006).

However, there have been two relatively recent, parallel, substantial changes in higher education which would seem to challenge the sufficiency of SI's current theoretical underpinnings: an unprecedented diversity in student backgrounds that has not been witnessed since the introduction of mass education in the 1970s (Higbee, Arendale, and Lundell, 2005; McInnis, Hartley, Polesel, and Teese, 2000) as well as a profound transformation of the traditional disciplines of higher education itself (Messer-Davidow, Shumway, and Sylvan, 1993) to meet the expansion of higher education into professional training (Lea and Stierer, 2000; McInnis, 2001; McInnis, James, and Hartley, 2000). Research covering the last 20 years into these transformations in higher education has adopted new perspectives and provided fresh insights into literacy and literacy teaching that would be invaluable to SI but which do not appear in its current suite of theoretical foundations. Therefore, SI is not advantageously placed to function optimally in this new higher education environment. To do so requires complementing and extending SI's theoretical base with research undertaken in what has become known as a pedagogy of multiliteracies based on new social practice definitions of literacy and 'literacies' (see, for example, The New London Group, 1996 and Lea and Stierer, 2000).

This paper makes a case for extending the theoretical foundations of SI in this way by, firstly, analysing the recent transformations in higher education, secondly, evaluating the adequacy of SI's current foundations in the light of these transformations, and finally, presenting a case for the inclusion of a multiliteracies perspective in SI's theoretical foundations to take account of these higher education transformations.

TRANSFORMATIONS OF HIGHER EDUCTION

The first of these transformations in higher education, the increasing diversity of the student population, has been noted and commented upon in equally diverse contexts. Reporting on trends in the first year experience of students in Australia, McInnis et al. (2000, p. 8) refer to the change as "dramatic", and that there was "too wide a range of abilities" evidenced in these students. Krause, Hartley, James and McInnis (2005, p. 79), analysing changes in Australian higher education over the preceding 10 years, provided more detail explaining that overseas student numbers have trebled, those of school-leavers have decreased, while those of non-traditional age students 20 to 24 years old have increased. In addition, there now exists a new group of students, full fee-paying domestic students. Similarly, Yorke (1999), studying non-completion of undergraduate students in the UK, identified an increase in students from non-traditional academic backgrounds and under-represented groups, while Kuh, Kinzie, Buckley, Bridges and Hayek (2006) in the US confirmed that attending college is now virtually universal, and, consequently, student backgrounds are wider and more diverse than ever with once 'minority' students becoming the majority. The expansion of student numbers in higher

education has brought increasing cultural, age, and linguistic heterogeneity in higher education student backgrounds.

The second transformation addressed here is that of the phenomenon of the "blurring, cracking and crossing" of traditional discipline boundaries (Klein, 1993) accompanying the expansion of higher education into professional training (Lea and Stierer, 2000). Studies of disciplinarity have revealed that discipline boundaries were never sacrosanct; they have ever been fluid (Messer-Davidow et al., 1993). Even such seemingly static subjects as physics and history have undergone many permutations (Klein, 1993). However, this has been accelerated and complicated due to the emergence of a focus in higher education on vocational training, for example nurses and performance artists such as dancers. Cross-disciplinary studies and 'new' discipline areas are now common, with all their contradictions and complexities. And these complexities have resulted in substantial diversity in assessment items for students. The course-work essay is no longer the dominant form of assessment; instead, among the lists of assessment items can be found such variety in form as choreographing and performance of dances (Mitchell, Marks-Fisher, Hale, and Harding, 2008), reflective learning journals (Boud and Walker, 1998; Creme, 2000) as well as community posters, annotated bibliographies, running records and online discussion forums (Macken-Horarik, Devereux, Trimingham-Jack, and Wilson, 2006). In addition, in the one course, nursing for example, a student may be required to write as a sociologist, a philosopher, a lawyer, a scientist and a practitioner (Baynham, 2000). This can be complicated by the increased offering and take-up of double degree programs, which are often situated across academic departments and disciplines (Krause et al., 2005). Heterogeneity is, therefore, also the catch word for both the content and the assessment types that higher education students now face.

This new heterogeneity in student background and higher education disciplines and assessment demands brings with it responsibilities of understanding the lived experience of these new cohorts of students, and not just in the cognitive domain, but the affective, cultural and social domains as well (Higbee et al., 2005).

THEROETICAL FOUNDATIONS OF SI

No one theoretical perspective is comprehensive enough to explain the factors influencing learning in higher education; consequently, SI draws upon a suite of learning theories which can be described as developmental (University of Missouri-Kansas City, 1995). This suite is eclectic and ranges in perspectives from behaviourism, information processing, through constructivism and academic socialisation to critical pedagogy.

Firstly, behaviourist learning principles evident in SI sessions are mostly those associated with Bloom's (1971, cited in Joyce and Weil, 1986, p. 318) mastery learning in which SI leaders take a large section of content along with its objectives, break it down into smaller, more manageable units with corresponding objectives and identify useful learning resources and strategies. Students then work on these units, while leaders identify any problems and provide appropriate supplementary material. Study skills, including grammar and various study practices, have been linked to this approach as well, and have always been seen as an integral and necessary part of student learning. However, on their own, they are

only surface level skills, atomised and never as neutral as they are portrayed. They have embedded within them specific cultural values for the creation of a limited and specific range of texts, mainly coursework essays. This specificity makes them insufficient to fully satisfy the new complexity in student needs arising from their diverse cultural and linguistic backgrounds and the new hybrid contextual demands of student learning (Lea, 1998; Lea and Street, 2000).

Secondly, information processing principles complement these behaviourist ones. Content is learned in a number of ways which are particularly applicable to SI principles. Firstly, content can be learned through concept attainment which is achieved by comparing and contrasting exemplars (Joyce and Weil, 1986, p. 32). Secondly, inductive methods can be used in concept formation: a process where SI leaders facilitate student activities of grouping and labelling similar data, interpreting data and applying principles to explain new phenomena (Joyce and Weil, 1986, pp. 43-47). Thirdly, SI leaders can encourage the employment of advance organisers (Ausubel, 1960). However, these activities are effective in promoting only some aspects of some students' learning as they are based on the assumption that knowledge is objective and resides in individual minds, and they lack a consideration of the range of linguistic, cultural and age backgrounds of present day students. Information processing principles, therefore, are of limited use in SI in contemporary times as they do not accommodate the heterogeneity of student backgrounds and consequent learning needs and do not recognise the social construction and contested nature of knowledge.

Thirdly, SI draws upon theories of cognitive development and thus constructivism of which Piaget (1971) and Vygotsky (1978) are the main seminal thinkers. Piaget (1971) theorised that students assimilate new knowledge from their experiences into their existing mental frameworks. If new knowledge contradicts existing mental frameworks, students may accommodate this new knowledge by changing these frameworks to fit (Piaget, 1971). This internalisation and ordering of experience is facilitated by language (Bruner, 1964; Piaget, 1971). Piaget (1973) also recommended that students be at the appropriate cognitive stage for the particular intellectual task, be active, and that an "optimal mismatch" and a social environment were preferred conditions for learning (Pass, 2004, p. 85). Vygotsky (1978), in parallel with Piaget, developed similar understandings of cognitive development: there were stages of intellectual development; learning occurred best within a Zone of Proximal Development (ZPD) lying just beyond the capabilities of students and where near peers could facilitate learning which may not have been possible if the students were working independently (Vygotsky, 1978). Bruner (1964) also noted the importance of language in ordering experience as well as the benefits of better equipped, mature students working with the less mature (Connnolly and Bruner, 1972). Thus, in SI sessions, students actively construct their understandings of course-work material together under the guidance of peer leaders.

The social environment and peers also figure in the discipline-based academic socialisation model (Ballard and Chanchy, 1988; Lea, 1998). Students learn by being socialised into the particular ways of thinking, speaking and writing valued in the institutions and disciplines they study, or, as Becher (1989) described them, "academic tribes". SI leaders, therefore, work with students to acculturate them into the various cultures and discourses of the disciplines they are studying and identify generic differences. This model has been supplemented by

phenomenographic research into orientations of student learning: deep, surface and achieving approaches (Hounsell, Marton, and Entwistle, 1984), of which a deep approach is encouraged during SI sessions although the achieving approach is often adopted by students with an instrumental conception of learning or those from a Confucian-heritage cultures who often do very well (Biggs, 1996).

However, even though it admits the social construction of knowledge, it only does so in a truncated way. This gives rise to two main criticisms of the academic socialisation model. One is that the academic culture is seen as relatively transparent, static and homogenous with some variation at discipline level, whereas it is now complex, fluid and heterogeneous, even within the one discipline (Lea, 1998; Lea and Street, 1998, 2000). The other is that this model positions disciplines and higher education institutions as far more benign and neutral than they are. When a more critical lens is applied, it is evident that there are processes of change and the exercise of power occurring at both the discipline and institution levels (Lea, 1998; Lea and Street, 1998, 2000). As well, in both constructivist and academic socialisation models of learning, the wider social context beyond the family and the education institution is taken for granted, and there is no critical analysis of its political nature and its influence on higher education and students themselves. Consequently, a broadening of the SI theoretical base was needed to accommodate both societal and institutional influences on learning and a more critical stance on them.

Finally, broadening the SI theoretical base has been done through linking critical pedagogy principles which take a critical view of the wider social contexts on student learning to SI (see, for example, Hurley et al., 2006). Freire (1985) offers these principles to SI: education is a struggle for meaning and students take control over their own learning which is aimed at liberation and giving students a voice within SI sessions (Hurley et al., 2006). While the admission of this critical approach into SI's theoretical foundations is appropriate, it omits Freire's (1985) notions of the struggle in power relations within society and its institutions and the contested nature of knowledge within higher education institutions themselves, especially in the new hybrid disciplines (Lea, 1998; Lea and Street, 1998, 2000).

These SI principles are inadequate, therefore, to provide guidance for the support of culturally, linguistically and age diverse students with the demands of the dynamic, new, hybrid disciplines. They require supplementing by new principles derived from qualitative research into contemporary higher education institutions and students with their "multiple shifting realities", their rich and varied experiences and their "complex multicultural issues" (Higbee et al., 2005, pp. 12-13). Furthermore, these new principles need to illuminate the social relationships and competing discourses that influence student identities and higher education institutions and reveal their disciplines as sites of contested power (Lea, 1998; Lea and Street, 1998, 2000).

MULTILITERACIES

New principles for the 'new contexts' in higher education student learning and literacy have indeed emerged from more recent qualitative research based on social practice perspectives and provide the much needed complement to SI's

theoretical base (Lea and Stierer, 2000). The starting point for these new SI principles is Street's (1984) groundbreaking perspective of literacy, that is, reading and writing, as situated social practice. He proposed an "ideological" model of literacy that has variously evolved into critical literacy (Freebody and Luke, 1990), "multiliteracies" (New London Group, 1996) or, more particularly in the higher education context, "academic literacies" (Lea, 1998). Arguing that the traditional "autonomous" model of literacy was flawed because it claimed that literacy is a singular notion based on knowledge being constructed in the mind of individuals and that texts and their meanings can be understood and constructed independently of their social context, he contended that literacy is, instead, multiple practices constructed socially in which are embedded various ideologies and cultural values often serving the interests of the institutions they are created and maintained within (Street, 1984).

The impetus for the further development of this view came from critical discourse analysis (CDA). CDA is a blend of linguistic analysis and ideology critique, a suite of "political, epistemic stances" whose subjects have been a variety of texts (A. Luke, 2002). It seeks to apprehend the changing relationships between the "micropolitics of everyday texts and the macropolitical landscape of ideological forces and power relations, capital exchange, and material historical conditions" (A. Luke, 2002). Central to CDA work is the notion of "discourses". Fairclough (1992) defined these as particular ways of using language to structure particular social relations, social identities and groups which become invested with particular systems of knowledge and beliefs or ideologies. These social relations and groups, in turn, structure discourses. Fairclough (1992) suggested a three-dimensional framework for analysing discourse in which texts are central, shaped by and shaping the discursive practices which give rise to them as well as the wider social historical conditions participants are situated within. Gee's (1990) view on CDA expanded Fairclough's notion of discourse into the idea of 'Discourse' which subsumes 'discourse' and adds to what he called language-in-use particular ways of thinking, feeling, acting, valuing, interacting and using objects which become 'normal' or 'natural' perspectives. Gee's expansion allows analysis of not just ideology, but identity as well (A. Luke, 2002).

CDA and these constructs of 'discourse' and 'Discourse' are particularly necessary for SI as they facilitate understanding of what happens in SI sessions. As SI leaders guide students, they, frequently unwittingly, socialise them into a particular worldview which is only one of many competing views which may or may not be congruent with the students' or even in their own best interests. Therefore, SI leaders (and supervisors) need to be acutely aware of the lack of neutrality of what they do as well as alternative discourses which are themselves often competing constructions of reality serving particular interests (New London Group, 1996). A number of researchers have been acutely aware of and applied CDA along with constructs of discourse and resultant research to the new education settings SI is found in.

Freebody and Luke (1990) are two such researchers whose interest is student learning of reading and whose reading model, they comment, could equally contribute to student writing. The 'four resources model of reading' (Freebody and Luke, 1990; A. Luke and Freebody, 1999), while developed for primary and secondary students, has critical elements which are especially pertinent to SI in the new contexts of higher education. Students are seen as enacting four necessary

roles when reading text: code-breaker, understanding the technology of the written language; text participant, understanding the meanings systems of the discourse; text user, successful participation in the social activities related to the text; and, of particular interest here, text analyst (Freebody and Luke, 1990; A. Luke and Freebody, 1999). It is in this fourth role that students are encouraged to resist exploitation, and silencing by querying the ideological positioning of the reader. A. Luke and Freebody (1997) recommended that such questions as the following are asked:

- What kind of person, with what interests and values, could both write and read this naively and unproblematically?
- What is this text trying to do to me? In whose interest?
- Which positions, voices, and interests are at play? Which are silent and absent?

This role as text analyst or critic along with its bank of questions is a useful addition to SI's theoretical base for another reason besides that of understanding and accommodating the new heterogeneity in student background and academic disciplines. It is that an understanding of the critical literacy perspective is being required of higher education students and therefore SI Leaders in their assessment. For example, reflexive assessment items, which ask students to question source documents' and students' own taken for granted discourses, beliefs or ideologies as well as those of their disciplines, have become more common in the new, hybrid disciplines and often cause confusion (Baynham, 2000; Creme, 2000; C. Luke, 2000). Assimilating this perspective into SI will serve the two-fold purpose of supplying a model it currently needs and lacks as well as providing leaders with a tool for both their own and their students' study.

As well as researchers, practitioners have adopted a social practice model of literacy and literacies. A number of them have focussed on higher education student learning and writing and, consequently, have an equally valuable contribution to make to SI. Lea and Street (1998; 2000; 2006) advocate an 'academic literacies' approach to student learning and writing in higher education so that the complex issues of identity and institutional relationships of power and authority that permeate student learning and writing practices can be revealed and understood. Students were observed to adopt either a reformulation approach or focus on content which involved reading material linearly in detail and then replicating particular perspectives and genres, or a challenge approach or focus on context which was characterised by integrating the task into real life (Lea, 1998). This challenge approach provoked conflict as students often bring with them discourses and literacy practices which contest those in higher education and when they write, concomitant conflicts in identity arise (Northedge, 2003a). Ivanic's (1998) research with mature-age students explicates this conflict in terms of the competing selves students have as these selves create and are created by each other: an 'autobiographical self, the identity brought to university; a 'discoursal self', the identity constructed in writing which is multiple and contradictory; a 'self as author', the extent of authoritativeness expressed and the general 'possibilities for self-hood' in the institution. Consideration of these learning and writing approaches, identities and conflicts is essential for SI to succeed in the new student and institution realities and for SI leaders to be able to "plot narrative excursions into expert discourse" and facilitate student competence in speaking it (Northedge, 2003b).

CONCLUSION

SI's eclectic mix of theoretical foundations currently serves the study skills and academic socialisation approaches to student learning and literacy well. However, it serves a literacies approach significantly less well. The most pertinent answer to this gap is one based on Street's (1984) model of literacy, one that views literacy as situated social practice and which recognises its socially constructed and socialising nature and that it always has embedded in it various, and sometimes competing, cultural values or worldviews. Thus, along with other research in multiliteracies, it illuminates the conflicted social relationships, Discourses and identities of new higher education students. Moreover, this research uncovers higher education and its disciplines as sites of contested power. Mapping this research onto SI will enable it to evolve to meet the challenges of the new complexity which characterises the contemporary higher education student experience.

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