

EDITED BY TANIA S. SMITH

# UNDERGRADUATE CURRICULAR PEER MENTORING PROGRAMS

Perspectives on Innovation by Faculty, Staff, and Students





# Undergraduate Curricular Peer Mentoring Programs

Perspectives on Innovation by Faculty, Staff and Students

Edited by Tania S. Smith

## Contents

Preface	vii
Introduction: The History and Scope of Curricular Peer Mentoring Programs  Tania S. Smith	1
Chapter 1: Defining Features of Curricular Peer Mentoring Programs  *Tania S. Smith*	23
Chapter 2: Discipline-Focused Peer Mentoring: Peer Teaching in Biology at the University of British Columbia Carol Pollock	51
Theory and Practice: Lave and Wenger on Communities of Practice Tania S. Smith	59
Chapter 3: Peer Mentoring in a Team-Taught Interdisciplinary Course: Engaging the 21st Century Student Through Peer-Led Learning Tina Pugliese, Tamsin Bolton, Veronika Mogyorody, Jill Singleton-Jackson, Robert Nelson & Ralph H. Johnson	67
Theory and Practice: Student Engagement  Tania S. Smith	81
Chapter 4: Peer Mentoring in Large-scale First-year Programs:  Academic Peer Mentors in First-year Courses at the University of Texas at Austin  Jennifer L. Smith	87

Theory and Practice: Tinto and Wenger on Learning Communities <i>Tania S. Smith</i>	103
Chapter 5: Peer Mentoring in a Technical Institution: Undergraduate Mentoring in Software Engineering Sanjay Goel	107
Theory and Practice: Vygotsky's and Bloom's Theories Tania S. Smith	121
Chapter 6: Hosting Peer Mentors in a Senior Interdisciplinary Course:  Notes from a Pre-History of Peer Mentoring at the University of Calgary  Marcia Jenneth Epstein	127
Theory and Practice: Bruffee on Collaborative Learning <i>Tania S. Smith</i>	143
Chapter 7: Supporting Peer Mentors: Recruiting, Educating and Rewarding Peer Mentors  Kate Zier-Vogel and Andrew Barry	151
Theory and Practice: Peer Mentor Education Through Service-Learning Tania S. Smith	183
Chapter 8: Case Studies of Conflict and Collaboration: Supporting Teaching Assistants Who Work with Peer Mentors Bryanne Young	191
Theory and Practice: Teaching Teams with Graduate and Undergraduate Assistants  Tania S. Smith	213
Conclusion: Program Development and Sustainability  Tania S. Smith	223
Bibliography	249
Index	265
About the Contributors	277

### **Preface**

### Tania S. Smith

This volume provides a foundation for program development and research in the genre of undergraduate *curricular peer mentoring* programs.

The definition of "curricular peer mentoring" set forth in this volume includes a wide and growing variety of programs that go by various names. Program subtypes include the three well known brands of Supplemental Instruction, Peer-Led Team Learning, and Peer-Assisted Learning. Curricular peer mentoring practices and structures are also sometimes embedded within First-Year Learning Communities and Writing Fellows programs. In addition, an uncountable number of unique, diverse, one-of-a-kind programs also exist which share many features of the better known "branded" programs but differ from each them substantively. This work builds on a long history of higher education program development and collects a significant amount of literature that has previously been scattered.

Curricular peer mentoring is a programmatic approach to enrich student learning and engagement in postsecondary courses. Instructors welcome a more experienced undergraduate student to a credit course they are teaching. The student then serves as peer mentor to the students enrolled. Peer mentors are not teaching assistants. They usually do not have authority to teach or grade. Instead, they can work alongside teaching assistants (if any) to enrich the student learning environment of the course from the student perspective. They may provide a number of peerappropriate mentoring, tutoring, facilitation and leadership roles that complement the roles of the course's instructor and teaching assistants. Peer mentoring is thus anchored in a particular course's students and instructional team, and peer mentors may engage the course's students both in classroom settings and beyond. A program provides specialized training and ongoing support for the undergraduate peer

mentors as well as resources for host instructors and their teaching assistants. See Chapter 2 for more detailed definitions of program features and terminology.

The organization of the book is as follows. The editor's Introduction and Chapter 1 provide an overview of the history and scope of the program genre of undergraduate curricular peer mentoring. Then follow seven body chapters (Chapters 2-8), each of which features a contributor's description and analysis of a curricular peer mentoring program. Each body chapter opens with an editor's introduction that outlines the contributor's unique perspective, key features of their programs, and program influences. Following each chapter is found a "theory and practice" section that introduces a theory or realm of practice and applies it to the preceding chapter, providing ideas for program innovation and critical analysis. At the very end of the volume is a conclusion that provides advice for program development, sustainability and research. The volume's overall emphasis on curricular peer mentoring practices and program structures supports the development and adaptation of effective and sustainable curricular peer mentoring programs of all sub-types that may fit within this genre.

### **Perspectives**

The volume provides several *perspectives* on curricular peer mentoring: 1) the editor's perspectives; 2) contributing authors' various perspectives; 3) perspectives on five unique programs; and 4) "theory and practice"—many perspectives are necessary to understand the dimensions of undergraduate curricular peer mentoring programs.

### The Editor's Perspective

The editor has brought to this volume the experience of founding, developing and directing an arts college's peer mentoring program since 2005 and an internal university network of curricular peer mentoring programs since 2008, as well as researching peer mentoring in the literature and through data collected from her institution's own programs. Her educational background, university position, department, and her teaching and research have led to a specific approach to program development and research. To discover more about the editor's background, program and network of programs at the University of Calgary, consult Chapters 7 through 9. The editor's perspective can be found throughout this volume, in the two introductory chapters and a concluding chapter, the introductions to contributor's chapters, and the theory and practice sections.

When first seeking program development literature, the editor became familiar with several broad perspectives on peer tutoring and peer-assisted teaching in higher education in works by Topping, Falchikov, and Miller, Groccia and Miller.<sup>3</sup> However, it soon became apparent that in the aforementioned works, terms like "peer tutoring" and "peer teaching" occasionally described approaches that were very different from mentoring in curricular settings by near-peer undergraduates. Some did not focus on a credit course linkage or placement, some were not post-

Preface ix

secondary programs, some focused on instructor-led reciprocal learning among students co-enrolled in courses, and sometimes the undergraduate was a peer in name only, performing teaching assistant roles rather than learning assistant roles.

On the other hand, many structural similarities were seen between programs like Supplemental Instruction, Peer-Assisted Learning, and Peer-Led Team Learning, as well as many other unique, one-of-a kind programs unaffiliated with these familiar "brands," including the editor's own unique program. Yet these programs lack a strong sense of common ground. Each sub-type and individual program tends to have a strong allegiance to its own names and terms. Each tends to distinguish itself from others and considers all its key features essential for success. Supplemental Instruction (SI) has well-earned status due to its longevity, international spread, and decades of research, and it teaches institutions how to replicate its model. Yet many non-SI programs, such as the editor's own, have been very successful despite lacking certain elements SI considers essential and adding features that it does not require. Over years of research, it became clear that these and other programs were part of a larger category of innovation that could generally describe all of them, while leaving room for minor structural variations due to particular institutional settings, program aims and philosophies. As a program developer, it took some humility and a broader perspective to look past what I at first saw as essential differences that separated our program types, and to admit that my own program was a close relative.

Innovations in higher education benefit from an inclusive, flexible, yet focused definition and terminology that goes beyond naming a particular approach, model or brand. For example, "service-learning" has arisen over the past few decades as a generic term that evokes a wide variety of community-campus partnerships in education and community development; programs may go by different names at local institutions, but share some essential features and structures, and many values. As a result, the concept of service-learning has become useful in enabling quite diverse programs to learn from each other and respect each other's differences. Program research has been productive, and funding and institutional policies have supported many unique, local innovations that fit within a broad service-learning model. To discover a similar generic framework for these curricular peer mentoring programs, a definition was gradually shaped through critical analysis of the literature and the program descriptions contributed to this volume.

In the spirit of objectivity, none of the program sub-types identified in this volume, not even the editor's own Arts Peer Mentoring program, has been identified as the "best" program model to which all other programs are compared, although certain program features and practices have been tested through research and experience and have been found to be valuable or effective. Comparisons to the editor's program inevitably appear in some sections authored by the editor, since the critical reflections of an experienced program developer, program director and researcher are of value. It is hoped that the editor's praise and well-intended critique of programs (including her own) will help to catalyze further research and collaboration among diverse programs in the genre.

Admittedly, no terminology is perfect or sufficient to explain a program type to people unfamiliar with it. The field is continually changing. Terms like *mentoring* 

will always have multiple meanings and connotations that vary across cultures and institutional settings. The terminology of curricular peer mentoring was developed through critical reflection on the terms used in the literature. It has been tested in practice at the editor's institution where a "curricular peer mentoring network" has joined together several similar programs in arts, nursing, science and business. Yet the terms are merely conceptual labels for the more fundamental educational activities and structures they identify. Even if this terminology does not spread beyond this volume, the underlying definitions and observations about common program features will be useful to readers.

### **Contributing Authors' Perspectives**

By emphasizing "perspectives" as well as program types, the book's structure highlights the fact that programs may be developed, supported, and studied by diverse members of various institutions and academic disciplines, who each have valuable perspectives to offer, and who each write with slightly different approaches. Contributors' institutional status varies: full-time or part-time administrator, faculty member, teaching assistant, non-academic staff member, graduate student, program researcher, or student or alumni who has served as peer mentor. Contributors are sometimes program founders or co-founders, program directors or coordinators, and some have been involved in instructing or hosting peer mentors.

All contributors' sections describe their programs and provide a degree of historical narrative and program evaluation of what seems to work well and what is challenging. However, some contributors' sections are written like research articles (providing either qualitative and quantitative data and a certain degree of cited literature or theory), one is a critical professional reflection on the experiences of teaching in a program (Chapter 5 by Epstein), and a few not only describe but may occasionally provide tips and offer advice to practitioners (Chapter 7 and the Conclusion).

Contributors' perspectives and program structures are influenced by their institution types, geographic regions, movements in higher education, bodies of literature, and theoretical and disciplinary perspectives on learning. For example, instructors in Science faculties (see Chapter 2 by Pollock) are more likely to have heard of Peer-Led Team Learning because of its association with the National Science Foundation in the United States and its original focus on Chemistry. Administrators, instructors and student affairs professionals may be familiar with First-Year Learning Communities from their colleagues at peer institutions and may be inspired by their data on increased retention rates. Faculty in the humanities may be more familiar with peer tutors and Writing Fellows and the theories of collaborative learning. Peer mentors who serve in these programs will be strongly influenced by their own experiences and their assigned readings in peer mentoring seminars and may later become graduate students and instructors who craft new programs (See Chapter 7 by Zier-Vogel and Barry). The program's originating unit within the institution (student services unit, arts faculty, or science faculty) shapes the program's features; all programs described in the volume's sections are founded in departments or academic faculties/colleges within their university, except one program at

Preface xi

the University of Texas (See Chapter 4 by Smith). Faculty members, teaching assistants and program staff who have already participated in one or more programs will be most familiar with their structures and aims, and will carry their knowledge to other institutions and/or future generations of colleagues (Chapter 6 by Epstein, Chapter 8 by Young).

### **Five Unique Programs**

When seeking the chapters for inclusion, the editor consciously sought programs that did not affiliate themselves with the three most common brands that have already been amply explained by other publications on Supplemental Instruction, Peer-Assisted Learning, and Peer-Led Team Learning. As a result, the book's contributing sections focus on innovative, one-of-a-kind curricular peer mentoring programs. These programs that borrow elements of established, branded program types but fall in the "other" category due to the presence of unique features that distinguish them, or their choice not (or not yet) to affiliate themselves formally with national or international organizations. There are many benefits to examining one-of-a-kind programs, the strongest one being that it introduces new creative ideas to the field.

Although this volume has seven chapters with contributors' sections, only five programs are featured among them. These programs are located at various types of postsecondary institutions in regions of North America and one in India:

- The University of British Columbia, a medical-doctoral university in British Columbia, Canada. (Chapter 2 by Pollock)
- *The University of Windsor*, a comprehensive university in Windsor, Ontario, Canada (Chapter 3 by Pugliese et al)
- The University of Texas at Austin, a comprehensive university in Austin, Texas, United States (Chapter 4 by J. Smith)
- Jaypee Institute of Information Technology, a technical university in Uttar Pradesh, India (Chapter 5 by Goel)
- The University of Calgary, a medical-doctoral urban university in Calgary, Alberta, Canada (Chapter 6 by Epstein; Chapter 7 by Zier-Vogel and Barry; Chapter 8 by Young)

The five programs represented in the contributors' chapters a wide variety of host course disciplines. Two contributors describe programs place peer mentors in a focused disciplinary area such as Biology (Chapter 2 by Pollock) and Engineering and Technology (Chapter 5 by Goel). All other programs coordinate interdisciplinary peer mentoring placements in courses throughout the Arts and Sciences and occasionally in Business.

Within each program, the host courses' levels of study vary. Two programs targeted only first-year courses (Chapter 3 by Pugliese et al; Chapter 4 by Jennifer L. Smith). The other three programs placed peer mentors in host courses across several years of study. One contributor's chapter (Chapter 6 by Epstein) describes a

senior level host course in detail, within the context of a program that placed peer mentors in all levels of undergraduate courses.

Programs described are of various sizes, and may be small even when an institution is large due to their stage of growth. Four programs featured in the volume placed peer mentors in more than one course, and one program was focused on a single host course at the time of writing (Chapter 3 by Pugliese et al.). One chapter begins by describing the implementation of peer mentoring in her course even before an official program existed (Chapter 6 by Epstein).

Such a diverse collection of five one-of-a-kind programs that still fit a unified yet flexible model has not been gathered since Miller, Groccia and Miller's edited book in 2001. Their collection was loosely unified by a briefly articulated philosophy of "peer-assisted teaching." However, Miller, Groccia and Miller's work included quite a number of programs that were not curricular peer mentoring programs, and the editors did not elaborate on their philosophy and the theories on which it is based. Since 2001, the student engagement movement has increased the emphasis on student peer support and many new programs have populated the genre. By providing a diverse set of perspectives and structures, like Miller, Groccia and Miller's collection, this volume does not espouse a particular established brand of peer mentoring program.

Innovators without a program, or those with an unique, home-grown curricular peer mentoring programs may be interested in affiliating with an existing program model with a strong history and research base described above in the introduction. Alternatively, they may develop a program whose structural elements and peer mentoring roles uniquely fit their organizational environment and goals. Those who do not wish to affiliate themselves with an established brand of program may feel isolated without a conceptual framework that places them in a broad, diverse community of program developers.

### Theory and Practice

As mentioned above, each of the seven body chapters (Chapters 2 to 8) contains a "theory and practice" section following it. These theory and practice sections summarize one or two relevant theories, educational practices, or bodies of research introduced in the volume's introduction, applying them to the preceding chapter and to curricular peer mentoring in general. Theories are tools for creative thinking by program developers and participants, as well as tools for researchers and program analysts. Reviews of research illustrate the dynamics of practices and higher education movements. Practitioners may use them to aid critical reflection about their own programs. Instructors of peer mentors may find them useful readings for a peer mentor's training course as an aid to reflection on mentoring practice.

Theories and practices were selected by the author based on critical reflection on the contributor's chapters and her wide reading in the peer mentoring literature cited in this volume and beyond. Prior to building a program, the editor was already familiar with peer tutoring and writing pedagogy, Bruffee's collaborative learning theories, experiential learning and service-learning pedagogy, Lave and Wenger's theories of situated learning, and Wenger's theories of communities of practice and

Preface xiii

learning communities. The editor became more familiar with additional theories and practices as she explored the literature in search of a better understanding of the underlying concepts of peer mentoring programs.

### **Notes**

- 1. David R. Arendale and Deanna C. Martin, eds., Supplemental Instruction: Increasing Achievement and Retention, Issue 60 of New Directions for Teaching and Learning. Jossey-Bass Higher and Adult Education Series (San Francisco, CA: Jossey Bass, 1994); Leo Gafney and Pratibha Varma-Nelson, Peer-Led Team Learning: Evaluation, Dissemination, and Institutionalization of a College Level Initiative, vol. 16, Innovations in Science Education and Technology (Springer, 2008); Stuart Capstick, Benefits and Shortcomings of Peer Assisted Learning (PAL) in Higher Education: An Appraisal by Students (Bournemouth, UK, January 2004), http://pal.bournemouth.ac.uk/documents/ Bnfts%20%26%20 Shrtcmngs%20%20of%20PAL3.pdf (accessed April 9, 2011).
- 2. Washington Center for Improving the Quality of Undergraduate Education, Evergreen State College, "Learning Communities National Resource Center," http://www.evergreen.edu/washcenter/project.asp?pid=73 (accessed April 7, 2012); T. Haring-Smith, "Changing Students' Attitudes: Writing Fellows Programs," in *Writing Across the Curriculum: A Guide to Developing Programs*, ed. McLeod, Susan and Soven, Margot, WAC Clearinghouse Landmark Publications in Writing Studies (Originally published in Print, 1992, Newbury Park, CA: Sage, 2000), 123–31, http://wac.colostate.edu/books/mcleod\_soven/ (accessed May 24, 2011).
- 3. Keith Topping, "The Effectiveness of Peer Tutoring in Further and Higher Education: A Typology and Review of the Literature," in *Mentoring and Tutoring by Students*, ed. Sinclair Goodlad (London: Kogan Page, 1998), 49–70; Nancy Falchikov, *Learning Together: Peer Tutoring in Higher Education* (New York: Routledge, 2001); Judith E. Miller, James E. Groccia, and Marilyn S. Miller, *Student-Assisted Teaching: A Guide for Faculty-Student Teamwork* (Bolton, MA: Anker, 2001).
- 4. Arendale and Martin, *Supplemental Instruction*; Gafney and Varma-Nelson, *Peer-Led Team Learning*; Capstick, "Benefits and Shortcomings."
  - 5. Miller, Groccia, and Miller, Student-Assisted Teaching.
- 6. Kenneth A. Bruffee, Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge (Baltimore, MD: Johns Hopkins University Press, 1993).
- 7. Jean Lave and Etienne Wenger, *Situated Learning: Legitimate Peripheral Participation* (New York: Cambridge University Press, 1991).
- 8. Etienne Wenger, *Communities of Practice: Learning, Meaning and Identity* (Cambridge: Cambridge University Press, 1998).