Tammy S. Conard-Salvo

Purdue University, Department of English, 500 Oval Drive, West Lafayette, IN 47907

765-494-4102   tcsalvo@purdue.edu   http://web.ics.purdue.edu/~tcsalvo

Education

Master of Arts in English, Texas Tech University, Lubbock, TX (1998)
Creating an Asian-American Mythology: Storytelling in Amy Tan's Fiction

Bachelor of Arts in English, Cum Laude, Howard Payne University, Brownwood, TX (1996)

Administrative Positions

Assistant Director for Diversity, Equity, and Inclusion (Current)
College of Health and Human Sciences, Purdue University, West Lafayette, IN

Contribute to the development, implementation and assessment of policies, practices and initiatives to foster DEI among HHS faculty, staff and students.

Associate Director, Writing Lab (2006-2021)
Acting Director, Writing Lab (2008-2009)
Assistant Director, Writing Lab (2003-2006)
Purdue University, Department of English, West Lafayette, IN

Administer the Writing Lab and Online Writing Lab, including tutor training, program development, and outreach.

Instructor: "Undergraduate Tutoring Practicum in Writing" (ENGL 390) and
"Practicum for Writing Lab Tutors" (ENGL 502)
Undergraduate and graduate courses focusing on writing center theory and practice.

Awarded Administrative and Professional Staff Advisory Committee Excellence Award (2012)

Coordinator of Writing Assessment and Tutors (2001-2003)
Wheelock College, Office of Academic Advising and Assistance, Boston, MA

Manage writing center and subject-based tutoring program.

Professional Consultations

I have provided workshop series and administrative guidance about starting or revitalizing writing centers for different institutions. Topics included a writing center's multiple roles on campus, faculty involvement as stakeholders, tutor training and recruitment, and general writing center administration. Additional information and references available upon request.

Teaching Positions

Writing Instructor (2001)
Brown University, Intensive English Language Programs, Providence, RI
"Writing Explorations" (1 section): Six-week ESL course taught in computer-based classroom.
"Writing I" (1 section): Four-week ESL course with integrated technology component.

Adjunct Faculty, English (2001)
Massachusetts College of Pharmacy and Health Sciences, Boston, MA
Expository Writing II" (2 sections)

Lecturer (1998-2000)
Texas Tech University, Lubbock, TX
"What and Who is American?: Cultural Identity in the 21st Century," computer-based, introduction to fiction (2 sections)
"Ethnicity and Representation in American Fiction" (3 sections)
"Essentials of College Rhetoric," computer-based (3 sections)
"Advanced College Rhetoric," computer-based (4 sections)

Graduate Part-Time Instructor (1996-1998)
Texas Tech University, Lubbock, TX
"Essentials of College Rhetoric," computer-based (3 sections)
"Advanced College Rhetoric," computer-based (2 sections)

Web Publishing Instructor (1998)
Texas Tech University, Institute for the Development and Enrichment of Advanced Learners (k-12 outreach program), Lubbock, TX

Tutoring Positions

Professional Writing Tutor (2001)
Massachusetts College of Pharmacy, Writing Center, Boston, MA

Writing Tutor, Onsite & Online (1996-1998)
Texas Tech University, University Writing Center, Lubbock, TX

ESL Conversation Partner (1993)
Howard Payne University, Department of ESL/International Students, Brownwood, TX

Professional Awards

Administrative & Professional Staff Advisory Committee Excellence Award, Purdue University (2012)

Special Merit Award, English Department, Purdue University (2010, 2005, 2006)

Research Grants

International Writing Centers Association Research Grant (2006) for "Beyond Disabilities: Text-to-Speech Software in the Writing Center"

Professional Development Grants

Administrative and Professional Staff Advisory Committee Professional Development Grant, Purdue University (Oct 2013, May 2009, Oct 2003)

College of Liberal Arts Administrative/Professional Staff Development Fund, Purdue University (Feb 2017, Oct 2015, Feb 2015, Oct 2014, Mar 2014, Oct 2013, Feb 2012, Oct 2011, Feb 2011, Oct 2010, Feb 2010, Oct 2009, Feb 2009, Mar 2008, Oct 2007, Feb 2008, Feb 2006, Oct 2005, Feb 2005, Feb 2004, Nov 2003)

Peer-Reviewed Journal Articles

"Public Documentation of Tutors' Work: Digital Badges in the Writing Center." *WLN: A Journal of Writing Center Scholarship* 40.1, Sept/Oct 2015. With John Bomkamp

"Listening to Revise: What a Study about Text-to-Speech Software Taught Us about Students' Expectations for Technology Use in the Writing Center." *Writing Center Journal* 32.2, 2012, pp 40-59. With John Spartz.

"Usability in the Writing Lab: (Re)designing a User-Centered OWL." *Computers and Composition* 26.2, 2009, pp 107-121. With Michael Salvo (first author), H. Allen Brizee, and Jingfang Ren.

"Tutoring is Real: The Benefits of the Peer Tutor Experience for Future English Educators." *Pedagogy* 8.2, 2008, pp 327-347. With Janet Alsup (first author) and Scott Peters.

"Professionalization, Tutor Training, and Service Learning in the Writing Center," *Praxis: A Writing Center Journal* 4.2, 2007. http://praxis.uwc.utexas.edu/praxisarchive/?q=node/145. With Serkan Gorkemli (first author).

Peer-Reviewed Book Chapters

"Naneun hangug salam-ibnida: Writing Centers and the Mixed-Raced Experience," *Out in the Center*, Utah State UP, 2019, pp 90-98.

"Dialogue and Collaboration: A Writing Lab Applies Tutoring Techniques to Relations With Other Writing Programs,*"Marginal Words, Marginal Work? Tutoring the Academy to the Work of the Writing Center*, Hampton Press, 2007, pp 183-196. With Linda S. Bergmann (first author).

Invited Speaking Engagements

"The Purdue OWL and the Land Grant Mission: Uncovering Invisible Innovation and Research," First Friday Series, Ball State University, Muncie, IN (2013)

"Writing Center Technology: Using Research, Resources, and Local Context to Anticipate Needs and Plans for Development," Including sessions: Online Tutoring and Mobile Technology, 10th Annual International Writing Centers Association Summer Institute (2012)

Conference Presentations

"The Art of Embracing Discomfort: A Heuristic-Based Approach to Reflexive Antiracist Tutoring Praxis," with Isaac Wang, Gentry Lee, and Steven Dawson. International Writing Centers Association Conference, Columbus, OH (2019)

"Performing Social Justice? Tracing Chocolate in the Global Network," with Michael Salvo. Conference on College Composition and Communication, Pittsburgh, PA (2019)

"Coding, De-Coding, and Recoding: Content Analysis of Alumni Tutor Survey for Program Development," with Harry Denny, Elizabeth Geib, and Talisha Haltiwanger Morrison. International Writing Centers Association Collaborative @ CCCC, Portland, OR (2017)

"Boiler up!/Drilling Down: Replicating the Peer Writing Tutor Alumni Project," with Harry Denny, Elizabeth Geib, Talisha Haltiwanger Morrison, and Beth Towle. International Writing Centers Association Conference, Denver, CO (2016)

"Out of the Classroom and Away from One-to-One Sessions: The Efficacy of Writing Groups for High-Achieving Students," with Vicki Kennell and Amy Elliott. East Central Writing Centers Association Conference, Alliance, OH (2016)

"Do We Do That? Writing Centers and Social Justice Work" in a panel titled "Slow and Lasting Change: Microshifts and the Development of Activist Writing Programs and Writing Centers," with Harry Denny, Stacy Nall, Jeffrey Gerding, and Nicholas Marino, Conference on College Composition and Communication, Houston, TX (2016)

"The Importance of Feminist Research in Women WCPs' Careers and Centers in the Academy," roundtable with Anna Sicari, Nicole Caswell, Dawn Fels, and Liliana Naydan. International Writing Centers Association Collaborative @ CCCC, Houston, TX (2016)

"Shantay, you stay! Lessons from a Case Study in Partnering with an On-Campus LGBTQ Center," with Jeffrey Gerding, Stacy Nall, and Harry Denny. International Writing Centers Association Conference, Pittsburgh, PA (2015)

"UxD and Online Writing Labs: Meeting the Needs of a Changing Global Audience," with Andrew Yim, Joshua Paiz, and Michael Salvo. Computers and Writing Conference, Menomonie, WI (2015)

"How Can the Writing Center Best Support Graduate Writers?" roundtable with Laura Plummer, Emily Bruce, Elizabeth Lenaghan, and Libbie Morley. East Central Writing Centers Association Conference, South Bend, IN (2015)

"Public Documentation of Tutors' Work: Digital Badges in the Writing Center," with John Bomkamp. East Central Writing Centers Association Conference, South Bend, IN (2015)

"Reimagining Relationships between High School and College in the Wonderful World of Writing Centers," with Bridget Carey, Collin Baker, Richard Severe, David Bentran, Caleigh Ostrom, Quilvio Ventura, and Desireae Craigle, International Writing Centers Association Conference, Orlando, FL (2014)

"Writing Centers and Technology," Special Interest Group, with Shareen Grogan, Dennis Bennett, Kim Abels, Russell Carpenter, and Beth Carroll, International Writing Centers Association Conference, Orlando, FL (2014)

"Closing the Communication Gap: How a Writing Center and a PW Program Can Respond to STEM Demands," Council for Programs in Technical and Scientific Communication, Colorado Springs, CO (2014)

"Soaring into the Future: The Purdue OWL and Supporting the Next Generation of Writers," with Joshua Paiz and Caitlan Spronk, East Central Writing Centers Association, Miami, OH (2014)

"The Stories We Tell: Narratives, Institutional Discourse, and the Public Documents of Writing Centers," with Stacy Nall and Tristan Abbott, Conference on College Composition and Communication, Indianapolis, IN (2014)

"Playing with Mobile Technologies: Options for Creativity and Innovation in the Writing Center," distance presentation with Clint Gardner and Jennifer Wells, International Writing Centers Association Conference, San Diego, CA (2012)

"Creating Mobile Technologies for Global Research Spaces," distance presentation with Adam Strantz and Michael Salvo, Computers and Writing Conference, Raleigh, NC (2012)

"Writing Centers and Multicultural Centers: How Best to Serve Underrepresented Students," with Jacqueline Borchert, Lizzie Berkovitz, and Angelica Duran, East Central Writing Centers Association Conference, Indianapolis, IN (2012)

"Sustaining International Collaboration: Co-creation of Writing Identity," Association of Teachers of Technical Writing Conference, St. Louis, MO (2012)

"International Articulations of Success," with Michael Salvo, WIDE-EMU Unconference, Ypsilanti, MI (2011)

"Making Innovation Public: Resources for DIY, Modification, and Sharing of Writing Center Technologies," with Shareen Grogan, Dennis Bennett, Steve Kaminczak, Matthew Gilchrist, and Kim Abels, Computers and Writing Conference, Ann Arbor, MI (2011)

"Developing a Writing Center Strategic Plan: Importing and Exporting in the (Fair) Trade of Resources," with Megan Schoen, Laurie Pinkert, Cristyn Elder, and Elizabeth L. Angeli IWCA Collaborative @ CCCC, Altanta, GA (2011)

"Creating Safe Cultural, Emotional, and Physical Spaces for Diverse Students in the Center," with Trixie G. Smith, Pamela B. Childers, Steven T. Lessner, and Richard Severe, International Writing Centers Association Conference, Baltimore, MD (2010)

"Online Writing Centers," Special Interest Group, with Dennis Bennett, Matthew J. Gilchrist, and Shareen Grogan, International Writing Centers Association Conference, Baltimore, MD (2010)

"Navigating Technology and Innovation in Writing Centers," with Kim Abels, Dennis Bennett, Matthew J. Gilchrist, Shareen Grogan, and Steve Kaminczak, International Writing Centers Association Conference, Baltimore, MD (2010)

"Sugar-on-a-Stick: Networked Writing Instruction and Outreach for the K-12 Classroom," with Rich Rice, John Tierney, Walter Bender, and Gerald Ardito, Computers and Writing Conference, West Lafayette, IN (2010)

"Converging with the ECWCA Community: Why and How You Can Host the ECWCA Conference," with Jeanne Smith, Jay Sloan, Doug Dangler, Jill Reglin, Trixie Smith, Leslie Johnson-Farris and Richard Severe, East Central Writing Centers Association Conference, East Lansing, MI (2010)

"Open-Sourcing Online Writing Centers: Inter-Institutional Cooperatives for Online Writing Center Technologies," distance presentation with Matthew J. Gilchrist, Kirsten Jamsen, and Samuel Van Horne, Midwest Writing Centers Association Conference, Rapid City, SD (2009)

"Sustainable and Usable @ School and in Writing Centers: Customized Online Tutoring Systems," with Kristen Moore and Jeffrey Bacha, Computers and Writing Conference, Davis, CA (2009)

"Next Generation OWLs: Customized Solutions and the Move Toward Open-Sourcing," with Matthew J. Gilchrist, Conference on College Composition and Communication, San Francisco, CA (2009)

"Mapping Diversity Through Writing Center Administration," with Joy Santee and Richard Severe, International Writing Centers Association, Las Vegas, NV (2008)

"Supporting Diversity Through Writing Center Administration," with Michelle Keesling, Joy Santee, and Richard Severe, East Central Writing Centers Association, Alliance, OH (2008)

"Listening to Revise: Mainstream Uses of Text-to-Speech Software in the Writing Center," with John Spartz, Conference on College Composition and Communication, New Orleans, LA (2008)

"Writing Centers as Professional Spaces: The Pedagogy of Professionalization in Tutor Training Courses," with Jingfang Ren, Serkan Gorkemli, and Joy Santee, International Writing Centers Association Conference, Houston, TX (2007)

"Redesigning OWL: User Testing as Research," with Michael Salvo, Dana Driscoll, H. Allen Brizee, Morgan Sousa, and Karl Stolley, Teaching and Learning with Technology Conference, West Lafayette, IN (2007).

"Grouping, Alignment, and 'Wasted Space': Prioritizing Users' Feedback to
Revise the OWL," Conference on College Composition and Communication, New York, NY (2007)

"Bringing a Broad Base of Users into the Project: Web-Based Remote Usability Testing of the Purdue OWL," Computer Connection Presentation, Conference on College Composition and Communication, New York, NY (2007)

"Creating a Usable OWL: Challenges for Writing Center Administrators," Computers and Writing Conference, Lubbock, TX (2006)

"Tutoring is Real: Writing Center Work As Authentic Field Experience," with Tracie DeMarr, East Central Writing Centers Association, Alliance, OH (2006)

"Multimedia in the Writing Center: Visual Rhetoric and Tutor Training," Conference on College Composition and Communication, Chicago, IL (2006)

"Unexpected Outcomes of Program Collaboration: Opportunities for Research," with Michael Salvo, Council for Programs in Scientific and Technical Communication, Lubbock, TX (2005)

"Access in the Writing Center: Adaptive Technology for Everyday Use," Conference on College Composition and Communication, San Francisco, CA (2005)

"Incorporating Design with Pedagogy: Redesigning the Purdue OWL," with Karl Stolley, Christopher Berry, and Linda Bergmann, Teaching and Learning with Technology Conference, West Lafayette, IN (2005)

"Defining Turf Vs. Enriching the Intellectual Commons," with Linda Bergmann, Thomas R. Watson Conference, Louisville, KY (2004)

"Beyond Disabilities: Text-to-Speech Software in the Writing Center," Computers and Writing Conference, Honolulu, HI (2004)

"Catching Up with the Writing Programs: E-books and the New Face of Tutor Training," with Serkan Gorkemli, East Central Writing Centers Association Conference, Greensburg, PA (2004)

"Technology Showcase: Purdue OWL," electronic poster with Linda Bergmann, Serkan Gorkemli, and Erin Karper, Teaching and Learning with Technology Conference, West Lafayette, IN (2004)

"Composing Relationships between Writing Centers and English Departments: Analysis of a Survey," Conference on College Composition and Communication, San Antonio, TX (2004)

"The Constraints of Freedom: Writing Back from a Liberated Writing Center," International Writing Centers Association Conference, Hershey, PA (2003)

"Are We Really Moving Forward?: Writing Center Coordinators' Multifaceted Jobs and Responsibilities," Northeast Writing Centers Association Conference, Nashua, NH (2003)

"Getting Past the Fear of Writing: Using Technology in ESL Writing Classes," Computers and Writing Conference, Normal, IL (2002)

"Finding a Voice in America: Displaced Mothers in Amy Tan's Fiction," Graduate English Society Conference, Lubbock, TX (1998)

"Re-Mythologizing the Asian American Experience: Deconstruction and Reconstruction in Tan's Fiction," Popular Culture Association/American Culture Association Conference, Lubbock, TX (1998)

"Nommo and the Christian Tradition: Names in Toni Morrison's *Song of Solomon*," South Central Modern Language Association, Dallas, TX (1997)

"Amy Tan's Use of the Oral Tradition in *The Joy Luck Club*," National Popular Culture Conference, San Antonio, TX (1997)

Conference Workshops

"Debunking the Myth of the Safe House: Strategies for Addressing Bias," with Richard Severe. International Writing Centers Association Conference, Chicago, IL (2017)

"Creating Safe Writing Center Spaces for Diverse Students," with Trixie G. Smith, Pamela B. Childers, Steven T. Lessner, and Richard Severe, Pre-Conference Workshop, Conference on College Composition and Communication, Louisville, KY (2010)

"Sustaining Writing Center Technologies Through User-Centered Design: Improving Websites and OWLs," with H. Allen Brizee, Dana Driscoll, and Morgan Sousa, Pre-Conference Workshop, Conference on College Composition and Communication, New Orleans, LA (2008)

"Creating a 'Tipping Point': Using Images and Words to Represent the Writing Center's Internal and Public Identity," with Linda Bergmann, Joy Santee, and Jodi Wagner, Pre-Conference Workshop, Conference on College Composition and Communication, New York, NY (2007)

"Writing Center as Community Member: Developing Collaborative Relationships in the University," with Linda Bergmann, Serkan Gorkemli, Jingfang Ren, Megan Hughes, Huiling Ding, and Jessica Clark. Pre-Conference Workshop, Conference on College Composition and Communication, Chicago, IL (2006)

"Gateways or Gatekeepers: Writing Center Roles and Practices," with Linda Bergmann, Serkan Gorkemli, and Jingfang Ren, Pre-Conference Workshop, Conference on College Composition and Communication, San Francisco, CA (2005)

On-Campus Workshops

"Drafting Admissions or Scholarship Essays," with Writing Lab tutors, Purdue Minority Engineering Program (summer and fall 2020)

"Strategies and Tips for Addressing a Professional Audience," with Kimberly Broughton and Gazal Singh, Purdue College of Science Diversity Programs (2019)

"Learning to Love Creative, Expository, and Narrative Writing… Or at Least Learning to Use it to Your Advantage if You're a Scientist," with Isaac Wang and Johnay Hall, Purdue College of Science Multicultural Programs (2019)

"Drafting Admissions Essays" and "Revising Admissions Essay," with Heather Murton, Isaac Wang, Caroline Jennings, Eugie Ruiz, and Elizabeth Geib, Purdue Minority Engineering Program (2019)

"Fundamentals of Business Writing I and II", with Beth Towle, Purdue CAAMP (2015)

"Business Writing I and Business Writing II," with Jeffrey Gerding, Purdue CAAMP (2014)

"Fundamentals of Business Writing I and II," with Rebecca McKanna, Purdue CAAMP (2014)

"General Tips for Writing," with Lizzie Berkovitz, Raysha Duncan, Xin Hou, Shannon Israelsen, and Haley Sands, Purdue College Mentors for Kids sixth-grade participants (2013)

"Email Etiquette and Effective Electronic Communication in the Workplace," with Cristyn Elder, Purdue Development Staff Retreat (2010)

"Email Etiquette and Effective Electronic Communication in the Workplace," with Kristen Moore, Purdue Marketing and Media staff (2010)

"Effective Electronic Communication in the Workplace," with Kristen Moore, Purdue IT staff (2009)

"The Rhetorical Situation: Writing in Art and Design," with Danielle Cordaro, Purdue's Art and Design graduate students (2009)

"Writing Effective CCCC Proposals," Linda Bergmann, David Blakesley, Shirley Rose, and Michael Salvo, Purdue's Rhetoric and Composition graduate students (2008)

"Transforming Student Projects into Showcase Displays," with Amy Ferdinandt Introductory Composition at Purdue Brownbag (2005, 2004)

"Resumes and Cover Letters," Purdue President's Leadership Class (2004)

"Visual Rhetoric," with Karl Stolley, Purdue Writing Lab Workshop Series (2004)

"Traditional Resumes," Purdue Writing Lab Workshop Series (2004)

"Writing Personal Statements for Graduate School," Wheelock College Graduate School Information Session

"Writing Effective Cover Letters," Wheelock College Office of Career Planning Workshop (2003)

"ESL Student Issues at Wheelock College," Social Work Field Instructor's Panel (2002)

"Self-Directed Study Groups," Wheelock College (2002)

"Time Management for Adult Students in a Community-Based GED Program" United South End Settlements, Boston, MA (2002)

"Time Management," Wheelock College (2001)

"Avoiding Plagiarism," Massachusetts College of Pharmacy (2001)

"Teaching Grammar and Mechanics," Texas Tech University (1997)

National Service

International Writing Centers Association Mentor (2019-present)

CCCC Committee on Computers in Composition and Communication (7Cs) (2009-2015)
Select sites for annual Computers and Writing Conference.
Review proposals for Computers and Writing Conference.
Review proposals for CCCC Computer Connection presentations.

Stage 1 Proposal Reviewer, Conference on College Composition and Communication (2014-2018)

Reviewer, *Computers and Composition* journal (2011-present)

Graduate Research Network Discussion Leader, Computers and Writing Conference (2010)

East Central Writing Centers Association Executive Board 2006-2010
Past-President (2009-2010)
President (2008-2009)
Vice President (2007-2008)
Board Member At-Large (2006-2007)

Co-Chair, East Central Writing Centers Association Conference (2009)

Educational Technology Proseminar, Institute for Elementary & Secondary Education, Brown University (2001)

Institutional Service

A/P Staff Networking Program Committee, College of Liberal Arts, Purdue University (2008-2016)

Diversity Action Committee, College of Liberal Arts, Purdue University (2005-2008)

Committee on Institutional Cooperation for Writing Centers (CIC-WC) among Big 10 institutions (2004-present)

"Defining Our Need: An English Fluency Assessment Study," Colleges of the Fenway/Davis Educational Foundation Mini-Grants Program (2001-2002)

ESL Task Force, Massachusetts College of Pharmacy (2001)

Writing Proficiency Exam Grader, Massachusetts College of Pharmacy (2001)

Departmental Service

Introductory Writing Committee, Department of English, Purdue University (2003-2020)
Subcommittee on Annual Writing Showcase (2010-2013)
Subcommittee on Publicity and Outreach (2008-2009)
Subcommittee on Conferencing in English 106 (2006-2007)

Subcommittee on Technology Goals Revision (2003-2004)

Planning Team, Computers and Writing 2010 Conference, Purdue University (2010-2011)

New Teaching Assistant Mentor, Texas Tech University (1998-1999)

Contributor, New Teaching Assistant Mentor Program, Texas Tech University (1998)

Texas Tech Online-Print Integrated Curriculum (TOPIC) Focus Group Member, Texas Tech University (1998-1999)

Co-Developer, Satellite Writing Center, Texas Tech University (1997)

Community Service
Guest Speaker, "The Purdue Online Writing Lab (OWL)," Lafayette Chapter, Altrusa International (2014)

Academic Affiliations
Conference on College Composition and Communication

CCCC Asian/Asian-American Caucus

East Central Writing Centers Association

International Writing Centers Association

National Council for Teachers of English

Other Professional Development
Trans Inclusion Training, Purdue LGBTQ+ Center (2021)

Maximizing Student Success, Purdue University (2019 and 2020)

Student Advocates Conference, Indiana Commission for Higher Education (2019 and 2020)

UNH Power Play, Purdue Division of Diversity and Inclusion (2019)

Green Zone Training, Purdue Veterans Success Center (2016)

QPR for Suicide Prevention, Purdue University (2015)

Safe Zone Training, Purdue LGBTQ Center + (2014)

OWL Technology Summit, Texas A&M University (2007)

Collaborative IRB Training Initiative (CITI) course, Social Behavior Research Modules, Purdue University (2004 and ongoing as required until present time)

"Nuts and Bolts: Conducting Research with Human Participants at Purdue," Committee on the Use of Human Subjects at Purdue University (2003)

"Online Tutor Training" and "Motivating Tutors," New England Peer Tutor Association Colloquium, Bryant College (2002)

"Managing Conflict to Make Your Life Easier," Colleges of the Fenway Professional Development Programs Simmons College (2002)

"The First Year and Beyond," Colleges of the Fenway Teaching and Learning Conference. Massachusetts College of Pharmacy and Heath Sciences (2002)