

David H. Collum, Ed.D.

David H. Collum, Ed.D.

dhcollum@gmail.com

1920 Hunting Lake Ct. 102, St. Louis, MO 63122 | 314-201-5841

Skills

- Forward thinking visionary with *interpersonal and communication skills* to build relationships.
- Energetic, positive and confident leader with *six years of experience* in higher education.
- Hardworking team player *dedicated to serving* students, faculty, and staff as the highest priority.

Education

Ed.D., Missouri Baptist University, St. Louis, MO. March, 2015.

Ed.S., Missouri Baptist University, St. Louis, MO. August, 2012.

AP Chemistry Training, Southeast Missouri State University, Cape Girardeau, MO. July, 2011.

Education Certification, University of Missouri St. Louis, St. Louis, MO. July, 2010.

Master of Science, Chemistry, Mississippi State University, Mississippi State, MS. 1979.

Bachelor of Science, Chemistry (Minor in Math), Delta State University, Cleveland, MS. August, 1976.

Associate of Arts, Holmes Junior College, Goodman, MS. May, 1975.

Teaching/Research Experience

2012 – present **Missouri Baptist University: Associate Professor in School of Education**

Teach: History and Philosophy of Science and Technology (Undergrad)
Teaching Science 5-12: Seminar and Field Experience (Undergrad & Grad)
Teaching in a Diverse Society Field Experience (Undergrad)
Integration of Curriculum, Instruction, and Assessment (Undergraduate)
Integration of Curriculum, Instruction, and Assessment (Graduate Ed.S)
Data Driven Decision Making (Graduate Doctoral)
Methods of Inquiry (Grad)
Doctoral Committee Chair/Member

Research: Serving as member of Institutional Data and Research Team on syllabi project. Leading university in rewriting all course syllabi to include Credit Hour Calculator and Institutional, Division, Program, and Course objective alignment (2014 – present)

Committee Chair/Member:

Serve (d) as chair or committee member for 12 doctoral 12 students

David H. Collum, Ed.D.

Served as Co-Chair of Institutional Data and Research Team analyzing university data for CAEP (Council for the Accreditation of Educator Preparation) visit. (2016-2018)

Served as member of Institutional Data and Research Team analyzing university data for NACEP (The National Alliance of Concurrent Enrollment Partnerships) accreditation visit. (2014 – 2015)

Serving as member of Institutional Data and Research Team analyzing university data for HLC visit. (2015 – Present)

Leading multi-university research project on use of simulation based learning to train preservice and in-service teachers on the understanding of diverse learners. Working with more than 12 universities in the U.S. and Puerto Rico. The project is led by our efforts at MBU to train preservice teachers in understanding how to teach diverse learners in the areas of ESL, socioeconomic status, exceptionalities, ethnicities, and more. This is done through the use of simulated classrooms, thus allowing our students to practice teaching these students with harming real students. (2014 – Present)

Research on the use of virtual Labs in flipped laboratory setting. (2015-2016)

Committees:

Scholarship and Research Committee Member – focuses on defining scholarships and research for faculty and students, assisting and supporting opportunities for research across campus, and providing guidance for facilitating scholarships and research.

Dean's Council – serves in advisory capacity and assists in developing policies/procedures/long-range planning.

Institutional Review Board – protects the rights and welfare of human research subjects recruited to participate in research activities conducted under the auspices of Missouri Baptist University.

Diversity – assists with the development of policies on diversity, assist with implementation of diversity across campus related to hiring practices, student recruitment, academic activities, and student services.

Employment History

- 2009- 2012 **Imagine College Prep School: Grades 9-12, Chemistry Teacher.**
Taught AP chemistry and chemistry.
Coached varsity baseball.
- 2008-2009 **St. Louis Public Schools: Grades 9-12, Chemistry Teacher.**
Taught chemistry at Vashon High School.
- 2003-2004 **St. Louis Public Schools: Grades 9-12, Chemistry and Physical Science Teacher.**
Taught chemistry and physical science at Roosevelt 9th Grade Center.

David H. Collum, Ed.D.

2002-2003 **St. Louis Public Schools: Grades 9-12, Physical Science, Biology, and Chemistry Teacher.**
Taught physical science, biology, and chemistry at King Tri A.

Additional Work Experience

2017-Present **Missouri Baptist University: Director of Assessment, School of Education**
Analyze School of Education for CAEP accreditation visit. Served as CAEP co-chair for Self-Study Report.

2012-Present **Missouri Baptist University: Assessment and Accreditation Coordinator**
Analyze University Data in Preparation for accreditation visits.

2014-2015 **Consultant to Louisiana School District on creation of Data Teams**
Helped district establish and implement data teams.

2013-2014 **Consultant to Kingston School District on creation of Data Teams**
Helped district establish and implement data teams.

2008-2009 **Walgreens, Certified Pharmacy Technician.**
Certified Pharmacy Technician in charge of filling patient prescriptions, typing patient prescriptions, stocking pharmacy, in charge of inventory, preparing daily and weekly inventory reports.

2001-2007 **CJ Sports Midwest, LLC, Owner.**
Owned and operated CJ Sports Midwest running youth sports events. Scheduled staff for concessions, scheduled umpires, scheduled games, purchased food for concessions and merchandise for sale, and managed all areas of the business. Here I learned valuable leadership skills on how to deal with different groups of individuals, i.e. umpires, coaches, parents, concession workers, and the athletes themselves who ranged in age from 7 – 18.

1992-2000 **Mallinckrodt Chemical, Inc., Supervisor of Peptide Purification and Finishing.**
Peptide Chemist, Peptide Production Group. Duties included synthesis and purification of peptides, ordering of supplies and equipment, and management of raw materials receipts and QC tracking.

1986-1992 **Sigma Chemical Company, Supervisor of Bioorganic Group.**
Duties included total responsibility for production and quality of 515 products. This involved the direction of a staff of 3 chemists.

1984-1996 **First Missouri Chemical Company, Co-Owner.**
Co-owner of specialty chemical manufacturing company.

1983-1984 **Monsanto Chemical Company, Consulting Chemist.**
Consulting Chemist to the Patent Legal Department on patent infringement cases.

1982-1983 **Mississippi State University/First Chemical Corporation, Chemist.**
Research and Development Chemist.

David H. Collum, Ed.D.

1976-1983 **United States Department of Agriculture and Mississippi State University, Graduate Student, Research Chemist, and Chemistry Instructor.**
Graduate Student, Research Chemist, and Chemistry Instructor.

Professional Development

Data Driven Decision Making Training March, 2012
 Learned how to use data to make decisions
Certified Pharmacy Technician certificate received May 16, 2008
 Became licensed Pharmacy tech for Walgreens
Miscellaneous advanced chemistry courses at Mississippi State University
 Additional courses toward Ph.D. degree in Chemistry
Management Training taught by AAIM Management Association
 Learned various Management skills
Dimensional Training “Conducting Appraisal Meetings” taught by Psychological Associates, Inc.
 Training on conducting annual performance reviews

Publications

- Collum, D., Christensen, R., Delicath, T. & Johnston, V. (2019). SimSchool: SPARCing New Grounds in Research on Simulated Classrooms. In K. Graziano (Ed.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 733-739). Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE).
- Collum, D., Johnston, V., Blanks, B. & Delicath, T. (2018). A Simulated Classroom: A Multi-University Study Evaluating simSchool’s Effectiveness on the Educational Needs of Diverse Learners. In E. Langran & J. Borup (Eds.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1403-1412). Washington, D.C., United States: Association for the Advancement of Computing in Education (AACE).
- Collum, D., Johnston, V. & Blanks, B. (2018). Part 1: Use of simSchool to Increase Teacher Candidate’s Understanding of the Educational Needs of Diverse Learners at a Midwestern University. In E. Langran & J. Borup (Eds.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1413-1415). Washington, D.C., United States: Association for the Advancement of Computing in Education (AACE).
- Johnston, V. & Collum, D. (2018). A Multi-University: Use of simSchool to Increase Pre-Service and In-Service Teachers’ Understanding of the Use of Differentiated Instruction and the Understanding of Classroom Management and Behavior. In E. Langran & J. Borup (Eds.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1550-1556). Washington, D.C., United States: Association for the Advancement of Computing in Education (AACE).
- Johnston, V., Collum, D. & Blanks, B. (2018). Use of simSchool to Increase Teacher Candidates’ Understanding of the Educational Needs of Diverse Learners at a University in Southwest Florida. In E. Langran & J. Borup (Eds.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1557-1563). Washington, D.C., United States: Association for the Advancement of Computing in Education (AACE).
- Collum, D., Dennis, L., Bishop, M. & Delicath, T. (2017). Differentiated Instruction: How simSchool was

- used in a Two Graduate Courses. In P. Resta & S. Smith (Eds.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 416-421). Austin, TX, United States: Association for the Advancement of Computing in Education (AACE). Retrieved October 29, 2017 from <https://www.learntechlib.org/p/177317/>.
- Collum, D., Dennis, L., Gohring, A., Bishop, M. & Delicath, T. (2017). Evaluating the Effectiveness of simSchool on Increasing Preservice Teachers' Understanding of the Educational Needs of Diverse Learners: A Study across Three Midwestern Universities. In P. Resta & S. Smith (Eds.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 422-431). Austin, TX, United States: Association for the Advancement of Computing in Education (AACE). Retrieved October 29, 2017 from <https://www.learntechlib.org/p/177318/>.
- Collum, D., Bishop, M., Dennis, L. & Delicath, T. (2017). The Versatility of simSchool in Teacher Preparation. In P. Resta & S. Smith (Eds.), In Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1490-1497). Austin, TX, United States: Association for the Advancement of Computing in Education (AACE). Retrieved October 29, 2017 from <https://www.learntechlib.org/p/177432/>.
- Collum, D., Bishop, M. & Delicath, T. (2016). Exploring simSchool: A Simulation-Based Learning Tool for Educators. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2016* (pp. 541-546). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).
- Collum, D., Bishop, M. & Delicath, T. (2016). Using Simulation Based Learning to Enhance Preservice Teachers' Understanding of the Educational Needs of Diverse Learners. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2016* (pp. 547-553). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).
- Scott, J.A., Hopper, S., Collum, D., Bishop, M. & Delicath, T. (2016). simSchool: A Pilot Study of Perceptions of Differentiated Instruction. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2016* (pp. 3061-3066). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).
- Collum, D.H. (2015). *Impacting preservice teachers' understanding of the educational needs of diverse learners through the use of simulation based learning* (Doctoral Dissertation). Available from ProQuest Dissertation and Theses database. (UMI No. 3700736)
- White, W.H., Jenkins, J.N., Parrott, W. L., McCarty, J.C., Jr., Collum, D.H. & Hedin, P.A. (1982). Generation mean analyses of various allelochemicals in cottons. *Crop Sci.* 22(5), 1046-1049.
- White, W.H., Jenkins, J.N., Parrott, W. L., McCarty, J.C., Jr., Collum, D.H. & Hedin, P.A. (1982). Strain and within season variability of various allelochemicals within a diverse group of cottons. *Crop. Sci.* 22(6), 1235-1238.
- Hedin, P.A., Jenkins, J.N., Collum, D.H., White, W.H. & Parrott, W.L. (1982) *Multiple factors in cotton contributing to resistance to the tobacco budworm, Heliothis virescens* F. Amer. Chem. Soc. Symposium Series, 347-365, 1982 (Book Chapter).

David H. Collum, Ed.D.

- Grimley, E.B. & Collum, D.H. (1982). *C-13 and P-31 study of ortho-, meta-, and para-substituted Phenyl-diphenylphosphines: Substituent Effect Correlation*. 34th Southeastern Regional American Chemical Society Meeting, Birmingham, Alabama.
- Hedin, P.A., Jenkins, J.N., Collum, D.H., White, W.H. & Parrott, W.L. (1982, March). "Abstracts of Papers," *Multiple Factors contributing to cotton plant resistance to the tobacco budworm*. 183rd National Meeting of the American Chemical Society, Las Vegas, Nevada.
- White, W.H., Jenkins, J.N., Parrott, W.L., McCarty, J.C., Collum, D.H. & Hedin, P.A. (1981). "Abstracts of Papers," *The inheritance and environmental interaction of chemicals conferring resistance to the tobacco budworm*. Proceedings. Beltwide Cotton Prod. Res. Conf.
- Collum, D. H., White, W. H., Parrott, W. L., Jenkins, J. N., Hedin, P. A. and Grimley, E. B. (1981) "Abstracts of Papers," *Studies on the Structural Properties of Cotton Tanin and its toxicity to the tobacco budworm*. 182nd National Meeting of the American Chemical Society, New York, New York.
- Grimley, E.B., Collum, D.H., Alley, E.G. & Layton, B. R. (1981) C-13 NMR study of ortho-, meta- and para- substituted phenyl-diphenylamines: Substituent Effect Correlation. *Org. Mag. Res.*, 15(3) 296-302.
- Collum, D.H. & Grimley, E.B. (1980). *Synthesis and C-13 and P-31 NMR Studies of mono-substituted triphenylphosphines*. 31st Southeastern Regional American Chemical Society Meeting, Roanoke, Virginia.
- Collum, D.H., White, W.H., Parrott, W.L., Jenkins, J.N., Lane, H.C. & Hedin, P.A. (1980). *The chemical basis for resistance in cotton to heliothis insects*. 32nd Southeastern Regional American Chemical Society Meeting, New Orleans, Louisiana.
- Collum, D.H., White, W.H. & Lane, H.C. (1980). *Study of condensed tannin in artificial diets*. 32nd Southeastern Regional American Chemical Society Meeting, New Orleans, Louisiana.
- Hedin, P.A., Collum, D.H., Langhans, V. E. & Graves, C.H. (1980) Distribution of Juglone and Related Compounds in Pecan and Their Effect on *Fusicladium effusua*. *J. Agric. Food Chem.* 1980, 28(2), 340-342.
- Collum, D.H., White, W.H., Parrott, W.L., Jenkins, J.N., Lane, H.C. & Hedin, P.A. (1980). "Abstracts of Papers," *Multiple resistance factors in cotton to heliothis insects*. 181st National Meeting of the American Chemical Society, Las Vegas, Nevada.
- White, W.H., Jenkins, J.N., Parrott, W.L., McCarty, J.C., Collum, D.H. & Hedin, P.A. (1980). "Abstracts of Papers," *Environmental variability as a compounding factor in identifying heliothis resistance cottons by chemical analysis*. National Meeting of The Entomological Society of America, Atlanta, Georgia.
- Collum, D.H. & Grimley, E.B. (1979). *Synthesis and Characterization of Potential Bi- and Tetradentate Ligands which contain Group V Donor Atoms*. 31st Southeastern Regional American Chemical Society Meeting, Roanoke, Virginia.
- Hedin, P.A., Collum, D.H., Langhans, V.E. & Graves, C.H. (1978). "Abstracts of Papers, *Biosynthesis of Juglone and Related Factors by the Pecan*. 30th Southeastern Regional American Chemical

David H. Collum, Ed.D.

Society Meeting, Savannah, Georgia.

Collum, D.H., Layton, B.R. & Grimley, E.B. (1978). "Abstracts of Papers," *Synthesis and C-13 Studies of Mono-Substituted Triphenyl Amines*. 30th Southeastern Regional American Chemical Society Meeting, Savannah, Georgia.

Grimley, E.B., Collum, D.H. & Layton, B.R. (1978). "Abstracts of Papers," *C-13 NMR Studies of Tetradentate Ligands and TBP Nickel (II) Complexes*. 30th Southeastern Regional American Chemical Society, Savannah, Georgia.

Presentations

Johnson, V. & Collum, D. (2019). *A Multi-University Study: Use of simSchool to Increase Understanding of the Needs of Students with Exceptionalities*, presented at the American Educational Research Association (AERA) conference Spring 2019 in Toronto, CA

Collum, D. (2019). *Changing the Face of Education: The simCommunity Model*, Paper presented at the Missouri Association of Colleges for Teacher Education (MACTE) 2019 Spring Conference, Columbia, MO.

Collum, D., Fusselman, J. & Dennis, L. (2019). *SimSchool: Increasing Preservice Teachers' Understanding of the Educational Needs of Diverse Learners* presented at the Missouri Association of Colleges for Teacher Education (MACTE) 2019 Spring Conference, Columbia, MO.

Collum, D. (2019). *Using Simulation Based Learning as a Recruitment Tool for Teacher Candidates through the PACE Model* presented at the Missouri Association of Colleges for Teacher Education (MACTE) 2019 Spring Conference, Columbia, MO.

Collum, D., Christensen, R., Delicath, T. & Johnston, V. (2019). *SimSchool: SPARCing New Grounds in Research on Simulated Classrooms*, presented at the Society for Information Technology & Teacher Education International Conference (SITE) in Las Vegas, NV, March 2019

Collum, D. & Johnson, V. (2019). *A Multi-University Study: A Simulated Classroom Equipping Candidates to Meet the Needs of Diverse Learners*, presented at the American Association of Colleges for Teacher Education (AACTE), in Louisville, KY, February 2019.

Collum, D., Miller, J., Hester, S, Reynolds, S. & Winship, J. (2019). *Rethinking Rural Preparation Programs to Ensure Successful Diverse Placements*, presented at the American Association of Colleges for Teacher Education (AACTE), in Louisville, KY, February 2019.

Collum, D., Johnson, V., Blanks, B. & Delicath, T. (2018). *A Simulated Classroom: Evaluating simSchool on its Effectiveness in Diversity Understanding through a Multi-university Study*, presented at the American Association of Colleges for Teacher Education (AACTE), in Baltimore, MD., March 2018

Collum, D., Johnson, V., Blanks, B. & Delicath, T. (2018). *A Simulated Classroom: A Multi-University Study Evaluating simSchool's Effectiveness on the Educational Needs of Diverse Learners*, presented at the Society for Information Technology & Teacher Education International Conference (SITE) in Washington, DC, March 2018

- Collum, D. & Johnson, V. (2018). *Use of simSchool to Increase Teacher Candidates' Understanding of the Educational Needs of Diverse Learners at a Midwestern University*, presented at the Society for Information Technology & Teacher Education International Conference (SITE) in Washington, DC, March 2018.
- Johnson, V. & Collum, D., (2018). *A Multi-University: simSchool to Increase Pre-Service and In-Service Teacher's Understanding of the Use of Differentiated Instruction and the Understanding of Classroom Management and Behavior*, presented at the Society for Information Technology & Teacher Education International Conference (SITE) in Washington, DC, March 2018
- Johnson, V. & Collum, D. (2018). *Use of simSchool to Increase Teacher Candidates' Understanding of the Educational Needs of Diverse Learners at University in Southwest Florida*, presented at the Society for Information Technology & Teacher Education International Conference (SITE) in Washington, DC, March 2018.
- Blanks, B., Dunleavy, M. & Collum, D. (2018). *Use of simSchool to Increase Teacher Candidates' Understanding of the Educational Needs of Diverse Learners at a University in South Central Appalachia*, presented at the Society for Information Technology & Teacher Education International Conference (SITE) in Washington, DC, March 2018.
- Collum, D., Dennis, L., Bishop, M. & Delicath, T. (2017). Differentiated Instruction: How simSchool was used in a Two Graduate Courses. In P. Resta & S. Smith (Eds.), Society for Information Technology & Teacher Education International Conference. Austin, TX, United States: Association for the Advancement of Computing in Education (AACE). March 2017.
- Collum, D., Dennis, L., Gohring, A., Bishop, M. & Delicath, T. (2017). Evaluating the Effectiveness of simSchool on Increasing Preservice Teachers' Understanding of the Educational Needs of Diverse Learners: A Study across Three Midwestern Universities. In P. Resta & S. Smith (Eds.), Society for Information Technology & Teacher Education International Conference. Austin, TX, United States: Association for the Advancement of Computing in Education (AACE), March 2017.
- Collum, D., Bishop, M., Dennis, L. & Delicath, T. (2017). The Versatility of simSchool in Teacher Preparation. In P. Resta & S. Smith (Eds.), Society for Information Technology & Teacher Education International Conference. Austin, TX, United States, March 2017
- Collum, D., Bishop, M. & Delicath, T. (2016). *Preservice Teachers' Understanding of the Educational Needs of Diverse Learners: A Comparison of a Traditional Field Experience and a Simulated Field Experience*, presented at the Council for the Accreditation of Educator Preparation, (CAEP), San Diego, CA., March 2016
- Collum, D., Bishop, M. & Delicath, T. (2016). *Exploring simSchool: A Simulation-Based Learning Tool for Educators*, presented at Society for Information Technology & Teacher Education International Conference (SITE), Savannah, GA., March 2016.
- Collum, D., Bishop, M. & Delicath, T. (2016). *Using Simulation Based Learning to Enhance Preservice Teachers' Understanding of the Educational Needs of Diverse Learners*, presented at the Society for Information Technology & Teacher Education International Conference (SITE) in Savannah, GA, March 2016
- Scott, J.A., Hopper, S., Collum, D., Bishop, M. & Delicath, T. (2016). *simSchool, A Pilot Study of Perceptions of Differentiated Instruction*, presented at the Society for Information Technology &

David H. Collum, Ed.D.

Teacher Education International Conference in Savannah, GA, March 2016.

- Collum, D., Bishop, M. & Delicath, T. (2016). *Preservice Teachers' Understanding of the Educational Needs of Diverse Learners: A Comparison of a Traditional Field Experience and a Simulated Field Experience*, presented at the American Association of Colleges for Teacher Education (AACTE), Las Vegas, NV, February, 2016
- Collum, D.H., Bishop, M., & Delicath, T. (2015). *Enhancing preservice teachers' understanding of diverse learners through classroom simulations*. Paper presented at the United States Distance Learning Association (USDLA) 2015 National Conference, St. Louis, MO.
- Collum, D.H., Bishop, M., & Delicath, T. (2015). *Impacting preservice teachers' understanding of the educational needs of diverse learners through the use of simulation based learning*. Paper presented at the Missouri Association of Colleges for Teacher Education (MACTE) 2015 Spring Conference, Jefferson City, MO.
- Collum, D.H., Bishop, M., & Delicath, T. (2015). *Enhancing preservice teachers' understanding of diverse learners through classroom simulations*. Paper presented at the United States Distance Learning Association (USDLA) 2015 National Conference, St. Louis, MO.
- Collum, D.H. & Delicath, T., (2013). *Objectives, objectives, everywhere, and how to assess them all*. Paper presented at the 33rd annual conference for MidAIR: "The Power of Storytelling: Shedding Light on Data", Kansas City, MO.
- Collum, D.H. (2013). *Process model for data analysis*. Paper presented at the 33rd annual conference for MidAIR: "The Power of Storytelling: Shedding Light on Data", Kansas City, MO.
- Delicath, T. & Collum, (2013). *Creating an adaptable credit hour calculator*. Paper presented at the 33rd annual conference for MidAIR: "The Power of Storytelling: Shedding Light on Data", Kansas City, MO.

Affiliations

- Active Member, American Educational Research Association (AERA)
Active Member, The Association for Institutional Research (AIR)
Active Member, Midwest Association for Institutional Research (MIDAIR)
Active Member, Society for Information Technology and Teacher Education (SITE)
Active Member, American Association of Colleges for Teacher Education (AACTE)
Active Member, Missouri Association of Colleges for Teacher Education (MACTE)