

Curriculum Vitae of David D. Carbonara

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Education

University of Pittsburgh Pittsburgh, PA.

Ed.D. - Science Education with a minor in Educational Research and Methodology.

Dissertation title: *The efficacy of the use of a computer-branched prose analysis model in evaluating the presentation of physics test questions to shelled examinees.*

Digital Equipment Corporation Boston, Massachusetts

System capacity planning and management

University of Pittsburgh Pittsburgh, PA

M.Ed. in Secondary Education

Thesis title: *The relationships between student's knowledge, problem-solving and learning of science using two modes on instruction.*

Duquesne University Pittsburgh, PA

Received Pennsylvania Instructional II certificate in Secondary Education - Mathematics and General Science.

Duquesne University Pittsburgh, PA

B.S. - Secondary Education - Mathematics and General Science

Pennsylvania Department of Education – Certificates

- K-12 Principal
- Instructional Technology Specialist
- Secondary Mathematics
- Secondary General Science

Experience

Assistant Professor

Director of the Program in Instructional Technology

Duquesne University, Pittsburgh, PA

Successfully taught Instructional Technology courses in the School of Education and developed a doctoral program in Instructional Technology.

Undergraduate Courses Taught:

- EDLT 301 – Instructional Technology for Text
- EDLT 302 – Electronic Literacy
- EDLT 401 – Web based Instructional Technology
- LTET 101 – Introduction to Instructional Technology I
- LTET 102 – Introduction to Instructional Technology, II
- LTET 201 - Integrated Technology for Middle Level
- LTET 202 – Middle School Visual Instructional Technology
- LTET 203 – Instructional Technology Middle Level

Master's Degree Courses Taught:

- GILT 511 – Technology and Education
- GILT 512 – Instructional Technology Design
- GILT 514 – Management of Instructional Technology Management
- GILT 515 – Instructional Technology Practicum
- GILT 520 – Teaching Across the Curriculum
- GILT 524 – Hardware and Software Certification
- GILT 540 - Delivery, Trends, Responsibilities and Professionalism for Online Teaching

Doctoral Degree Courses Taught

- GDIT 701 – Professional Leadership in Instructional Technology
- GDIT 706 – Developing a Learning Environment using Instructional Technology
- GDIT 707 – Instructional Technologies Design and Leadership
- GDIT 708 – Technologies Management and Leadership
- GDIT 718 - Instructional Technology Policy, Planning and Management

Developed courses for pre-service teachers in PreKindergarten-4 program:

- LTET 315 – Instructional Technology for Literacy
- LTET 325 – Instructional Technology for Numeracy
- LTET 335 – Instructional Technology for Science and Social Studies
- LTET 345 – Instructional Technology for PreK-4

Developed and implemented cohort of master's degree program via distance learning in Rome, Italy

Workshops Conducted:

- Preparation for Online Teaching and Learning
- Introduction to Instructional Technology for Teachers

Committees:

- Member, Leading Teacher Quality Circle
- Member, Educational Technology Committee
- Member, PK-4 PDE Early Childhood Planning Committee
- Member, 4-8 PDE Middle Level Planning Committee
- Member, 4-8 PDE Science Education Planning Sub-Committee
- Co-chair, Information Literacy Committee
- Past Co-chair, University Educational Technology Committee

Instructor

- *Community College of Allegheny County, West Mifflin, PA*
 - CIT 120 – Introduction to Hardware and Software
- *Community College of Allegheny County, Pittsburgh, PA*
 - CIT 115 – Network+ Certification

Director of Information Services/Technology

Bethel Park School District, Bethel Park, PA

Nationally recognized in "Who's Who of Educational Technology Professionals – 2000"

Twice cited in "National Blue Ribbon School of Excellence"

Managed the design, implementation and support of integrated technology for a school district that employed 1,000 individuals including 350 teaching professionals reaching 6,000 students. This included all voice, data and video networking for the 17 major remote instructional and administrative buildings within the district. Effectively executing this effort required a unique blend of academic, administrative and technical skills in order to implement support infrastructures to meet cross functional goals. This included:

- Strategic planning guidance and technology leadership to administrative and academic staff;
- Designed technology resources for curriculum integration for academic staff;
- Supervision of seventeen staff members from secretaries, and technicians to part-time students and

- building computer lab aides;
- Chaired various school district technology planning committees, including Citizen's and Faculty's Technology groups;
- Member, National Science Foundation Project, Powerful Computing for Education in Mathematics and Science, Carnegie-Mellon University;
- Liaison between the University of Pittsburgh, Education Research Methodology Department and the Bethel Park School District: Federal Project –Microcomputer Test Analysis;
- Secured over \$1M in state and federal grants for district;
- Coordinated, negotiated and managed all information services maintenance contracts.

Certification Review Specialist

International Society of Technology and Education/Council for Accreditation of Education Programs

Review university programs for preponderance of evidence for technology coaches

Association for Education and Communication Technology/ National Council for the Accreditation of Teacher Education

Review university programs for preponderance of evidence for technology facilitators

Pennsylvania Department of Education Harrisburg, PA

Review university programs for standards – Kutztown University and East Stroudsburg University.

Statistician Consultant

ProSoft Technologies Bethel Park, PA

Private consultant for statistical analysis project in oncology.

Instructor

The Pennsylvania State University

Computer Literacy for Educators

Instructor

Community College, Allegheny County

- Designed and taught Introduction to Computers.
- Designed and taught Intermediate Computer Programming.

Teacher

Bethel Park School District, Bethel Park, PA

- Successfully completed four years of teaching.
- Computer Club sponsor.
- Planetarium director.
- Buhl Planetarium Science Fair sponsor.
- Pennsylvania Junior Academy of Science sponsor and judge.
- Newspaper advisor.

Teacher

Quaker Valley School District, Sewickley, PA

- Successfully completed one and one-half years of teaching.
- Science Club & Student Council sponsor.
- Tutor, Home-School Visitor program.
- WTAE-TV4 Junior High Quiz co-sponsor.

Books and Chapters

Hodge, A., & Carbonara, D.D. (2015). Video use in teacher education: Transition from a teaching tool to an assessment tool. In Prince Nwachukwu Ololube, & Peter James Kpolovie (Eds.). *Enhancing teacher education with advanced instructional technologies*. Hershey, PA: Idea Group Publishing.

- Carbonara, D. D. (2013). K-20 learning along a novice to expert continuum in online learning environments. In Victor Wang (Ed.). *Handbook of Research on Teaching and Learning in K-20 Education*. Hershey, PA: Idea Group Publishing.
- Tomei, L. and Carbonara, D. (2006). Implementing educational technology in K-12 public education: The importance of factors to senior school administrators in Pennsylvania. In Mehdi Khosrow-Pour (Ed.), *Emerging trends and challenges in information technology management* (pp 1038-1041). Hershey, PA: Idea Group Publishing.
- Carbonara, D. (Ed.). (2005). *Technology literacy applications in learning environments*. Hershey, PA: Idea Group Publishing.
- Carbonara, D. (2003). Introducing leadership issues in pre-service teacher education programs through instructional technology courses. In Mehdi Khosrow-Pour (Ed.), *Information technology & organizations: Trends, issues, challenges & solutions* (pp. 208-209). Hershey, PA: Idea Group Publishing.
- Carbonara, D. (2003) Technology literacy issues for freshman education majors in a leading teacher program. In Tanya McGill (Ed.), *Current issues in IT education*, (pp.228-237). Hershey, PA: Idea Group Publishing.
- Carbonara, D. (2002). Preparing future teachers to be instructional technology leaders. In Mehdi Khosrow-Pour (Ed.), *Issues and trends of information technology management in contemporary organizations*. (pp. 107-108). Hershey, PA: Idea Group Publishing.

Peer-reviewed Presentations

- Alqurashi, E., Gokbel, E.N., and **Carbonara, D.** (2017, November). Teachers' knowledge in content, pedagogy and technology integration: A comparative analysis between teachers in Saudi Arabia and United States. *British Journal of Educational Technology*, 48(6). 1414-1426. DOI: 10.1111/bjet.12514
- Williams, J., Mautino, R.M., and **Carbonara, D.D.** (2017, October 17). Conversation: Loose Parts: A pathway from play to technology. Vancouver, B.C: AACE e-Learn 2017.
- Brown, C., Mugayitoglu, B., Cumbie, S.A., and **Carbonara, D. D.** (2017, February 16). Not just group work: Engaging students in online asynchronous collaborative learning. Conference on Higher Education Pedagogy. Blacksburg, VA: Virginia Tech University.
- Brown, C., Mugayitoglu, B., Cumbie, S.A., and **Carbonara, D. D.** (2016, February 10). E-Portfolio: A celebration of learning. Conference on Higher Education Pedagogy. Blacksburg, VA: Virginia Tech University.
- Carbonara, D. D.** (2016, February 10). Creating engaging group activities in a FlexTech room: Designing a student-centered environment for collaborative research literacy for first year students. Blacksburg, VA: Virginia Tech University.
- Carbonara, D. D.** (2015, February 9). Engaged learning leadership. Conference on Higher Education Pedagogy. Blacksburg, VA: Virginia Tech University.
- Carbonara, D.D.** (2014, July). Video use in pre-service teacher (PST) education. Atlanta, GA. International Society for Teacher Education, Annual Conference.
- Carbonara, D. D.** (2014, February). Video Capture and Measurement of Teacher Student Interaction and Reflection in Face to Face and Online Classes. Conference on Higher Education Pedagogy. Blacksburg, VA: Virginia Tech University.
- Poyo, S., Wilson, B., **Carbonara, D.D.** (2013, June). Teacher Preparation: Active and strategic learning through lesson transformations. San Antonio: TX. International Society for Technology Education, Annual Conference.

- Carbonara, D. D.** (2013, February). Designing a support structure for the conversion of classroom lessons to online delivery. Conference on Higher Education Pedagogy. Blacksburg, VA: Virginia Tech University.
- Poyo, S., Wilson, B., **Carbonara, D. D.** (2013, February). Transforming our teaching: Authentic and strategic learning with TPCK activity types. Conference on Higher Education Pedagogy. Blacksburg, VA: Virginia Tech University.
- Mautino, RM., **Carbonara, D.D.**, & Kush, J. (2012, February). *Inquiry Infused with Technology: A New Paradigm for Higher Education Literacy Instruction*. Paper to be presented at the Conference on Higher Education Pedagogy. Blacksburg, VA: Virginia Tech University.
- Carbonara, D.D.**, & Tomei, L. (2011, November). Instructional Technology Sustainability for Staff Development. Paper presented at the annual conference of the Association for Educational Communications and Technology at Jacksonville, FL.
- Miller, G., & **Carbonara, D.D.** (2011, February). *Emergency preparedness with Web 2.0: A strategy for professional development*. Paper presented at the Association for the Advancement of Computing in Education conference, Global Time 2011 – Global Conference on Technology, Innovation, Media and Education, online.
- Carbonara, D. D.** (2010, October). *Cyber Learning: A curriculum development doctoral course using the TPCK model*. Paper presented at the annual conference of the Association for Educational Communications and Technology at Anaheim, CA.
- Carbonara, D.** (2009, October). *Technological pedagogical content knowledge (TPCK) as a curriculum model for middle level education*. Paper presented at the annual conference of the Association for Educational Communications and Technology at Louisville, KY.
- Carbonara, D.**, Heo M., & Kush, J. (2009, October). *Implementation of Digital Story-Telling in an Urban Elementary School*. Paper presented at the annual conference of the Association for Educational Communications and Technology at Louisville, KY
- Heo, M., Kush, J.C., **Carbonara, D.**, & Koch, A. (2009, October). A model for the assessment of teacher dispositions towards the utilization of technology. Paper presented at the 8th European Conference on e-Learning (ECEL), Bari, Italy.
- Koch, A., Heo, M. Kush, J.C. & **Carbonara, D.** (2009, July). Active learning with digital media: The use of podcasting in reflective learning for elementary social studies instruction. Paper presented at the 4th International Conference on e-Learning (ICEL), Toronto, Canada.
- Carbonara, D. D.** (2009, February). *Curriculum for instructional technology knowledge and skills development in a pre-service teacher preparation program*. Paper presented at the annual meeting of the American Association for Colleges of Teacher Education. Chicago, Illinois.
- Carbonara, D. D., Kush, J., & Heo, M.** (2009, February). *Instructional technology dispositions: Effects on academic success*. Paper presented at the annual meeting of the American Association for Colleges of Teacher Education. Chicago, Illinois.
- Carbonara, D. D.** (2008, March). *Portfolio reflections and changes in dimensions for maturation*. Paper presented at the Annual Meeting of the American Educational Research Association, New York, New York.
- Carbonara, D.D.**, Kush, J., & Heo, M. (2008, October). *A Model for the Development of Instruments Designed to Assess the Dispositions of Teacher Candidates toward Technology*. Paper presented at the Association for Educational Communications and Technology International Conference, Orlando, FL.
- Carbonara, D. D.**, Heo, M., & Kush, J. (2008, February). *Teacher candidates' disposition toward pre-service education and technology use: Report of test-retest reliability measures*. Paper presented at the annual meeting of the American Association for Colleges of Teacher Education. New Orleans, Louisiana.

- Carbonara, D. D.** (2008, January). Mediated immersive learning – Second Life™ as a learning tool. Paper presented January 5, 2008 at the Hawaii International Conference on Education.
- Brinda, W., Mautino, R., & **Carbonara, D. D.** (2008, January). Struggling adolescent readers learn to comprehend, visualize, and enjoy what they read with alternative strategies using instructional technology experiences. Paper presented January 5, 2008 at the Hawaii International Conference on Education.
- Heo M., Kush J., & **Carbonara, D. D.** (2008, January). Digital storytelling for 21st century skills. Paper presented January 5, 2008 at the Hawaii International Conference on Education.
- Carbonara, D. D.** (2007, October). *Assessing the dispositions toward technology of teacher candidates*. Paper presented at the annual conference of the Association for Educational Communications and Technology. Anaheim, California.
- Carbonara, D. D.**, Kush, J., & Heo, M. (2007, October). Assessing the dispositions toward technology of teacher candidates. Paper presented October 25, 2007 at Association for Educational Communications & Technology annual conference.
- Carbonara, D. D.** (2006, July). *Effect of integrating technology on dispositions in pre-service teacher preparation programs: A report on practices and data gathered to support the new vision for teacher education*. Paper presented at the National Educational Computer Consortium, San Diego, California.
- Carbonara, D. D.** (2006, July). *Portfolio reflections and dispositions fo pre-service and in-service teachers in instructional technology courses*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, California.
- Carbonara, D. D.** (2005, May). Competency based teacher education program in instructional technology. Paper presented at the annual meeting of the Information Resources Management Association. San Diego, California.
- Carbonara, D. D.** (2004, May). *Field experiences and internship for the novice*. Paper presented at the annual meeting of the Information Resources Management Association, New Orleans, Louisiana.
- Carbonara, D. D.** (2002, May). *Technology Literacy Issues for Freshmen Education Majors in a Leading Teacher Program*, Refereed Paper presented at the annual conference of Information Resources Management Association. Seattle, Washington
- Carbonara, D. D.** (1984, April). *Fetal heart and abdominal contraction monitor tracings before and after statistical bootstrapping*. Modeling and Simulation Conference Pittsburgh, Pennsylvania
- Carbonara, D. D.** (1981, April). *Research approaches for analyzing free prose data embedded in curriculum*. National Association for Research in Science Teaching Grossinger, New York.
- Carbonara, D. D.** (1980, November). *The relationship of field independence to mental maturation*. Paper presented at the Pennsylvania Science Teacher's Association. Harrisburg, Pennsylvania
- Carbonara, D. D.** (1980, November). *The implementation of microcomputers into a school district*. Paper presented at the Pennsylvania Science Teacher's Association. Harrisburg, Pennsylvania
- Carbonara, D. D.** (1980, April). *Research approaches for assessing energy education educations*. Paper presented at the annual conference of the National Association for Research in Science Teaching. Boston, Massachusetts.
- Carbonara, D. D.** (1980, March). *Projects and group activities for the middle school child – gifted, average, and slow*. Paper presented at the Spring Conference of the Western Pennsylvania League of Middle Schools. Pittsburgh Pennsylvania.

Carbonara, D. D. (1979, November). *The relationships between propositional logic, verbal operations, figural operations and mental maturation*. Paper presented at the Pennsylvania Science Teachers Association/Western Pennsylvania Science Teachers Association. Monroeville, Pennsylvania

Carbonara, D. D. (1978, November). *Problem-solving in the middle schools*. Paper presented at the annual conference of the National Association of Middle Schools Pittsburgh, Pennsylvania

SERVICE – International and National

- Editor-in-Chief, International Journal of Information and Communication Technology Education
- Associate Editor, International Journal of Online Pedagogy and Course Design
- Reviewer, Journal of Digital Learning and Teacher Education
- Reviewer, Journal of Science Education and Technology
- Reviewer, Journal of Research on Technology in Education
- President, Teacher Education Division, Association of Educational and Communications Technology
- Chair - Association of Educational and Communications Technology, Standards Committee
- Member – National Council for Accreditation of Teacher Education – Specialty Area Studies Board
- Member, Terms and Definitions Committee, Association of Educational Communication and Technology
- Member, NCATE – Coalition of Organizations for the Professional Preparation of Educators

Service – University

- NCATE-IT Accreditation Writer
- PDE-IT Accreditation Writer
- Co-chair, Steering Committee of the Provost's Information Literacy Committee
- Member, IT Doctoral Program Quality Council
- Member, Leading Teacher Program
- Member, Leading Teacher Program – Middle Level Sub-committee
- Member, Leading Teacher Program – Middle Level Working Group
- Member, Leading Teacher Program – PK-4 Working Group
- Advisor, Kappa Delta Epsilon – School of Education service

AWARDS

- Teacher Education Division Award for Scholarly Advancement of the Field of Educational Technology and Service to AECT, Association for Educational Communications and Technology. Jacksonville, Florida, 2011.
- Apple Polishing Award. The Mu Epsilon Chapter of the Order of the Omega
- Lexington Who's Who of Educational Technology Professionals
- Member National Blue Ribbon School of Excellence
- International Who's Who of Professionals
- Member National Blue Ribbon School of Excellence

Grants

AT&T – Digital Story Telling for under-privileged elementary school students	\$20,000
Enhancing Education through Technology Partner with Diocese of Pittsburgh	\$125,000
Enhancing Education through Technology Partner with Pittsburgh Public Schools	\$845,000
Link to Learn – State of Pennsylvania Staff Development	\$44,000
E-rate – Universal Service Fund Servers, Network, Telecommunications	\$125,000
Link to Learn – State of Pennsylvania Y2K, Wiring, Servers	\$40,000
E-rate – Universal Service Fund, Servers	

Offices

- Bethel Park Band Boosters, President
- Association for Educational Communications and Technology, past-President of the Teacher Education Division

Interests:

- Ballroom Dancing, Latin Dancing, Robotics, Glass Making