Daniel J. Davis

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EDUCATION

Delft University of Technology **Delft, the Netherlands**
Ph.D. in Computer Science, Large-Scale Learning Analytics Expected Early 2019

Georgetown University **Washington, D.C.**
M.A. in Communication, Culture & Technology Graduated May 2015
Education Technology Concentration

Assumption College **Worcester, Massachusetts**
B.A. English, Concentration in Writing & Mass Communications Graduated May 2013
Minor in Graphic Design with honors: cum laude

RESEARCH INTERESTS

My research uses and advances learning analytics techniques in open, online education at scale by pushing the boundaries towards personalized & adaptive learning environments. I develop methods to gain a deeper understanding about how the design of online learning environments affects learner success and engagement, often by implementing and testing instructional interventions at scale using randomized controlled experiments.

PUBLICATIONS

Davis, D., Chen, G., Hauff, C., Houben, G.J. (2018) Activating Learning at Scale: A Review of Innovations in Online Learning Strategies. *Computers & Education*. In Press.

Davis, D., Triglianos, V., Hauff, C., Houben, G.J (2018) SRLx: An Personalized Learner Interface for MOOCs. In *Proceedings of the 13th European Conference on Technology-Enhanced Learning*, EC-TEL '18.

Davis, D., Seaton, D., Hauff, C., Houben, G.J. (2018) Toward Large-Scale Learning Design: Categorizing Course Designs in Service of Supporting Learning Outcomes. In *Proceedings of the Fifth Annual ACM Conference on Learning at Scale*, L@S '18.

Davis, D., Kizilcec, R.F., Hauff, C., Houben, G.J. (2018) The Half-Life of MOOC Knowledge: A Randomized Trial Evaluating the Testing Effect in MOOCs. In *Proceedings of 8th International Conference on Learning Analytics and Knowledge*, LAK '18.

Van der Zee, T., **Davis**, D., Saab, N., Giesbers, B., Ginn, J., van der Sluis, F., Paas, F., Admiraal, W. (2018) Evaluating Retrieval Practice in a MOOC: How writing and reading summaries of videos affects student learning. In *Proceedings of 8th International Conference on Learning Analytics and Knowledge*, LAK '18.

Bodily, R., Kay, J., Aleven, V., **Davis**, D., Jivet, I., Xhakaj, F., Verbert, K. (2018) Open learner models and learning analytics dashboards: A systematic review. In *Proceedings of 8th International Conference on Learning Analytics and Knowledge*, LAK '18.

Khalil, M., **Davis**, D., Wong, J. (2018) Gamification in MOOCs: A General Overview. In *Open Education Global Conference*, OE Global '18.

Seaton, D., Davis, D. (2018) Toward Large-Scale Learning Design: Categorizing Course Designs in Service of Supporting Learning Outcomes. In *HybridEd Workshop.* 2018

Zhao, Y., **Davis**, D., Chen, G., Lofi, C., Hauff, C., Houben, G.J. (2017) Certificate Achievement Unlocked: Exploring MOOC Learners' Behaviour Before & After Passing. In *Proceedings of the 25th Conference on User Modeling, Adaptation and Personalization,* UMAP '17

Pardos, Z., Tang, S., **Davis**, D., Le, C.V. (2017) Enabling Real-Time Adaptivity in MOOCs with a Personalized Next-Step Recommendation Framework. In *Proceedings of the Fourth Annual ACM Conference on Learning at Scale*, L@S '17.

Davis, D., Jivet, I., Kizilcec, R.F., Chen, G., Hauff, C., Houben, G.J. (2017) Follow the Successful Crowd: Raising MOOC Completion Rates through Social Comparison at Scale. In *Proceedings of 7th International Conference on Learning Analytics and Knowledge*, LAK '17.

Chen, G., **Davis**, D., Krause, M., Aivaloglou, E., Hauff, C., Houben, G.J. (2017) Buying Time: Enabling Learners to become Earners with a Real-World Paid Task Recommender System. In *Proceedings of 7th International Conference on Learning Analytics and Knowledge*, LAK '17.

Chen, G., **Davis**, D., Krause, M., Aivaloglou, E., Hauff, C., Houben, G.J. (2016) Can Learners be Earners? Investigating a Design to Enable MOOC learners to Apply their Skills and Earn Money in an Online Market Place. In *IEEE Transactions on Learning Technologies* (TLT).

Davis, D., Chen, G., van der Zee, T., Hauff, C., Houben, G.J. (2016) Retrieval Practice and Study Planning in MOOCs: Exploring Classroom-Based Self-Regulated Learning Strategies at Scale. In *Proceedings of the 11th European Conference on Technology-Enhanced Learning*, EC-TEL '16. ***Best Student Paper Award**

Davis, D., Chen, G., Hauff, C., Houben, G.J. (2016) Gauging MOOC Learners' Adherence to the Designed Learning Path. In *Proceedings of the Ninth International Conference on Educational Data Mining*, EDM '16.

Chen, G., **Davis**, D., Hauff, C., Houben, G.J. (2016) On the Impact of Personality in Massive Open Online Learning. In *Proceedings of the 24th Conference on User Modeling, Adaptation, and Personalization*, UMAP '16.

Chen, G., **Davis**, D., Hauff, C., Houben, G.J. (2016) MOOC Learners in Social Web Platforms. In *Proceedings of the Eighth International ACM Web Science Conference*, WebSci '16.

Davis, D., Chen, G., Jivet, I., Hauff, C., Houben, G.J. (2016) Encouraging Metacognition & Self-Regulation in MOOCs through Increased Learner Feedback. In *the Sixth International Learning Analytics & Knowledge Conference*, LAK '16, Learning Analytics for Learners Workshop.

Chen, G., **Davis**, D., Hauff, C., Houben, G.J. (2016) Learning Transfer: Does it take place in MOOCS?. In *Proceedings of the Third Annual ACM Conference on Learning at Scale*, L@S '16. ***Best Paper Honorable Mention**

van Staalduinen, J.P., **Davis**, D., Topolovec, S. (2016) Opening University Education to the World and Improving Education: Using MOOC-based Research as a Tool for Innovation. In *Proceedings of the 9th annual International Conference of Education, Research and Innovation*, ICERI 2016.

Davis, D., Chen, G., Hauff, C., Houben, G.J. (2015) Identifying Trigger Events in MOOCs. In *the Second GESIS Computational Social Science Winter Symposium*.

Davis, D., Hanacek, J., Myers, A., Mulroney, S., Vovides, Y. (2015) Capturing, Tracing, and Visualizing the Spread of Technology-Enhanced Instructional Strategies. In *Proceedings of the Seventh International Conference on Education and New Learning Technologies*, EDULEARN '15.

Davis, D. (2015) Mapping Student Activity Data to the Visual Display of Online Learning Environments. Georgetown University Master's Thesis. Defended May 2015.

Davis, D. (2015) The First Comprehensive MOOC Manifesto. In *Proceedings of the 15th STGlobal Conference on Science & Technology in Society*, STGlobal '15.

Vovides, Y., Youmans, T., Arthur, P., **Davis**, D., Ayo, E., Pongsajapan, R., McWilliams, M., Kruse, A., (2015) Examining Learners Cognitive Presence in MOOCs. In *the Fifth International Learning Analytics & Knowledge Conference*, LAK '15, Learning Analytics Review Workshop.

Vovides, Y., **Davis**, D., Kruse, A., Pongsajapan, R., Youmans, T., Maloney, E. J. (2014) GeorgetownX: Applying an Integrative Learning Analytics Design Approach. In *EDUCAUSE Annual Conference*, EDUCAUSE '14.

PROFESSIONAL SERVICES

Reviewer, Computers & Education

Reviewer, Journal of Learning Analytics

Reviewer, ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2018

Reviewer, IEEE Journal of Transactions on Learning Technologies

Program Committee Member, 8th International Learning Analytics & Knowledge Conference (LAK) 2018

Program Committee Member, European Conference on Technology-Enhanced Learning (EC-TEL) 2018

Program Committee Member, Open Education Global Conference (OE Global) 2018

Sub-Reviewer, 18th International Conference on Artificial Intelligence in Education (AIED) 2017

Program Committee Member, European MOOC Stakeholders Summit (eMOOCs) Conference (2017)

Program Committee Member, LAK '17 Conference Workshop on FutureLearn data: what we currently have, what we are learning and how it is demonstrating learning in MOOCs (2017)

INVITED TALKS	**Early Career Cross-Community Event**, London Festival of Learning, presenting poster of Large-Scale Learning Design work (June 2018)

INVITED TALKS

Early Career Cross-Community Event, London Festival of Learning, presenting poster of Large-Scale Learning Design work (June 2018)

Technologies for Digital Learning Lab (T4D), Pontificia Universidad Católica de Chile, talk on open science and knowledge retention in MOOCs (December 2017)

Learning & Student Analytics Conference (LSAC), Vrije Universiteit Amsterdam / Amsterdam Center for Learning Analytics; talk on goal setting in MOOCs (October 2017)

Kennedy Institute of Ethics, Georgetown University, talk on fostering positive collaboration in large-scale online learning environments (September 2017)

Centre for Education & Learning: Innovation Room, Erasmus University Rotterdam, the Netherlands; talk on Adaptive MOOC Learner Support Systems (June 2017)

LAK '17 Workshop on Integrated Learning Analytics of MOOC Post-Course Development, on looking beyond the MOOC platform in the social web for insights about MOOC learners (March 2017)

edX, Adaptive & Personalized Learner Support Systems in the edX Platform (January 2017)

Columbia University Teachers College, Baker EDM Lab Learning Analytics Seminar: Exploring the Role of Learners' Cultural Background in MOOCs (January 2017)

Massachusetts Institute of Technology (MIT), Office of Digital Learning, talk on raising MOOC completion rates through social comparison at scale (January 2017)

TU Delft, Christiaan Huygens Career College Panel, informing Bachelors and Masters students on the decision to pursue PhD research (December 2016)

Harvard University, HarvardX & VPAL, talk on analyzing learning pathways through MOOCs (August 2016)

Worcester Polytechnic Institute (WPI), ASSISTments Lab, talk on experimentation with scalable, adaptive feedback in MOOCs (August 2016)

Centre for Education & Learning: Innovation Room, Erasmus University Rotterdam, the Netherlands; talk on Gauging MOOC Learners' Adherence to the Designed Learning Path (January 2016)

WORKSHOPS ORGANIZED

Wang, Y., **Davis**, D., Chen, G., Paquette, L. (March 2017) Integrated Learning Analytics of MOOC Post-Course Development Workshop. In *Proceedings of 7th International Conference on Learning Analytics and Knowledge*, LAK '17.

Hauff, C., **Davis**, D., Chen, G., Aly, A. (November 2016) 15th International Dutch-Belgian Information Retrieval Workshop. TU Delft, the Netherlands

van der Zee, T., **Davis**, D., Pouw, W. (January 2016) High quality PhD Research: Reproducibility, Credibility and Validity. Erasmus University Rotterdam, the Netherlands

GRANTS & PROJECTS

Successful transition for secondary to higher education using learning analytics (STELA).
Co-Funded by the Erasmus+ Programme of the European Union

TEACHING EXPERIENCE

Georgetown University LDES 504 Intro to Learning Analytics
  ⬥ *Co-Instructor*

Delft University of Technology Master's Course on Web Science and Engineering
  ⬥ *Teaching Assistant*

Delft University of Technology Master's Seminar on Web Information Systems
  ⬥ *Teaching Assistant* (2015, 2017)

Georgetown University CCTP 505: Intro to Interdisciplinary Studies
  ⬥ *Lead Teaching Assistant, Technology & Discussion*

Georgetown University INFX 523: Globalization's Winners and Losers
  ⬥ *Teaching Assistant*

Georgetown University CCTP 798: Key Concepts in Technology & How to Use Them

◆ *Teaching Assistant*

Georgetown University CCTP 850: Digital Presence & Strategic Persuasion
  ◆ *Teaching Assistant, Instructional Design*

RESEARCH MENTORING	Ioana Jivet: MSc student in Software Technology; Master's Thesis advisor; "Encouraging Metacognition & Self-Regulation in MOOCs with Learner Feedback"

EMPLOYMENT

Center for New Designs in Learning and Scholarship (CNDLS)   **Washington, D.C.**
Visiting Researcher   Summer 2017

Center for New Designs in Learning and Scholarship (CNDLS)   **Washington, D.C.**
Graduate Researcher, Learning Analytics & Design   August 2014-May 2015

Prof. Martin Irvine's "Key Concepts of Technology" Course   **Washington, D.C.**
Course Environment Designer & Teaching Assistant   January 2014-January 2015

Kennedy Institute of Ethics (KIE) PHLX101   **Washington, D.C.**
Core MOOC Production Team   November 2013-May 2015
Instructional & Graphic Designer

Georgetown University Information Services (UIS)   **Washington, D.C.**
Graphic Designer, New Media Consultant   October 2013-September 2014

National Education Association (NEA)   **Washington, D.C.**
Campaigns & Elections   September 2013-December 2013

ADDITIONAL ACTIVITIES

Society for Learning Analytics Research (SoLAR)
  ◆ Member: Education Committee   March 2018 –

Pontificia Universidad Católica de Chile, T4D Lab   Winter 2017
  ◆ Visiting Researcher

Carnegie Mellon LearnLab Summer School   Summer 2016
  ◆ Computer-Supported Collaborative Learning (CSCL) track

Georgetown University Graduate Student Organization   August 2014 – May 2015
  ◆ Director of Technology & Web Development

GeorgetownX Design Innovation Group   January 2014 – May 2015
  ◆ Leader (2014-2015 Academic Year)

Designing the Future(s) of the University   December 2013 – May 2015
  ◆ Research & Innovation

FILM CREDITS

Terrorist #4 (2018) *Art Director*
Festival Selections:
    Arab American National Museum Film Festival (2018)
    Lebanese Independent Film Festival (2018)
    Southern Comedy Showcase (2018)
    Houston Comedy Film Festival (2018)
    Austin Comedy Short Film Festival (2018)
    Migranti Film Festival (2018)

Oustaz (2016) *Producer*
Festival Selections:
    Berlin International Film Festival (2016) - **Nominated for Golden Bear**
    Festival du Film Pan-Africain de Cannes (2016)
    IndieLisboa (2016)
    Brooklyn Film Festival (2016) - **Winner, Spirit of the Festival**
    Future Shorts Summer Programme (2016)
    Kinemastik Malta (2016)
    Festival Cinémas d'Afrique (2016)
    Milan Film Festival (2016)

Sudan Independent Film Festival (2017)

Shukran My Totem (2016) *Photographer*
Festival Selections:
Sudan Independent Film Festival (2017)

Blink If You Can Hear Me (2015) *Art Director*
Festival Selections:
DC Shorts Film Festival (2015)