This article provides information about the Instructional Systems and Learning Technologies (ISLT) program at Florida State University. It offers a brief history of ISLT followed by a detailed description of graduate degrees, curricula, research projects, and people who contribute to the success of this distinguished program.

The Florida State University (FSU) is a public institution located in Tallahassee, the state capitol of Florida. Founded in 1851 as the West Florida Seminary, it became the Florida Military and Collegiate Institute during the American Civil War. This evolved into the first liberal arts college in the state known as Florida State College. In 1909, it became the Florida State College for Women. The institution returned to coeducational status in 1947 and was renamed The Florida State University (Florida State University, 2016).

Approximately 41,000 students currently attend the university. FSU is a comprehensive degree-granting university, offering baccalaureate, master's, specialist, and doctoral degrees. It is a Carnegie Doctoral/Research University–Extensive institution, the highest distinction awarded by the Carnegie Foundation, and is designated as one of two pre-eminent research universities in the state of Florida.

In 2016, FSU was ranked 38th in the United States among all public national universities by U.S. News & World Report. This ranking represents a continued upward trajectory for the university, which has a strong focus on academic rigor and student success. The College of Education is ranked 37th among Graduate Colleges of Education, and the College’s online programs were ranked third in the country. Additionally, the university has been named one of the seven Diversity Champions by INSIGHT into Diversity magazine, marking the university’s commitment to diversity and inclusion.

PROGRAM IDENTITY
Instructional Systems and Learning Technologies
The Instructional Systems and Learning Technologies (ISLT) program at FSU has a strong focus on instructional design, emerging technologies, and performance improvement. The program’s mission is to improve individual learning and to enhance organizational performance. Program faculty conduct research to advance knowledge in the areas of human learning, instructional systems, performance improvement, and learning technologies. We prepare scholars to identify and pursue important research questions and conduct rigorous studies that focus on learning and performance. We also prepare practitioners to analyze complex learning and performance problems and to design, develop, and evaluate appropriate solutions to improve learning and performance.

Program History—From CAI to IS to ISLT
Our program has a distinguished history (Reiser, Dick, Klein, & Dennen, 2012). The program’s foundation was laid during the late 1960s when FSU offered a doctoral degree in Educational Research with a minor in computer-assisted instruction (CAI). In 1972, FSU became one of the first universities in the world to offer graduate degrees in Instructional Systems (IS). Early pioneers in the field such as Robert Gagné, Leslie Briggs, Robert Branson, Walter Dick, and Robert Morgan developed the first instructional systems curriculum. These scholars were...
The Instructional Systems and Learning Technologies (ISLT) program at FSU has a strong focus on instructional design, emerging technologies, and performance improvement.

The goal of current program faculty has been to honor the rich tradition of this long-standing program, while at the same time building new areas of expertise.

Experimental psychologists focused on applied, real-world problems. The program curriculum reflected their work, including courses on research design, measurement and statistics, learning theory and its application, instructional design models and applications, CAI development, and formative evaluation.

The field grew rapidly during the 1970s and 1980s as did the IS program at FSU. The program added faculty members including Roger Kaufman, Ernest Burkman, Marcy Driscoll, John Keller, Robert Reiser, and Walter Wager. During this period, the program continued to focus on theory, research, and practice of learning and instructional systems design. The curriculum also expanded to emphasize needs assessment, performance system analysis, motivational design, and project management.

During the decades that ensued, various other scholars, such as Don Ely, Mike Hannafin, David Merrill, and Mike Spector, were either tenure-earning or visiting members of the FSU faculty. Some of these faculty members also held joint appointments at the Learning Systems Institute. These faculty members shaped the program by sharing their research interests and expertise and by participating in program-curriculum development and governance activities. By 2011, the faculty had reached its current configuration. The goal of current program faculty has been to honor the rich tradition of this long-standing program while at the same time building new areas of expertise.

In 2013, nearly 200 alumni and students, along with current and emeriti faculty, celebrated the 40th anniversary of the IS program at FSU. During this professional development conference and reunion, we introduced a revised curriculum and a new name for the program—Instructional Systems and Learning Technologies (ISLT). This change was implemented for two main reasons: to reflect the evolving nature of our field and to fully represent the strengths and research foci of the current faculty, who had been developing a learning technologies–focused curriculum track during the previous five years.

ACADEMIC DEGREES AND CURRICULA

The ISLT program at FSU offers a master of science degree (MS) and a doctor of philosophy degree (PhD), as well as two graduate certificates focusing on human performance technology and online instructional development. The ISLT curriculum, for both MS and PhD students, draws upon a common core of courses and then allows students to focus on either instructional design and performance improvement (IDPI) or learning technologies (LT). Alternatively, ISLT students may choose to balance their coursework across the IDPI and LT areas once they have completed the common core.

The ISLT common core (Figure 1) consists of foundational courses that are required for all students in the MS and PhD programs. These courses represent the four key areas of knowledge that ISLT professional draw upon in their work. Although most of these courses are shared between the MS and PhD programs, the MS students have their own inquiry course, which focuses explicitly on practitioner-oriented data skills, whereas the PhD students fulfill their inquiry and research requirements through a more extensive sequence of courses focused on research design and methods.

In the instructional design and performance improvement (IDPI) focus area (Figure 2), students attain skills and knowledge related to the systematic design of instruction, performance system analysis, evaluation, project management, change management, and non-instructional interventions. Students who focus in this area typically seek careers as instructional designers and performance improvement specialists in applied settings such as business and industry, colleges and universities, and the military.

In the learning technologies (LT) focus area (Figure 3), students learn to apply their instructional design skills across a wide variety of technological contexts. Although prominent software programs and learning platforms are taught within these courses, the emphasis is on the design and development of pedagogically grounded
learning activities, curricula, and learning environments. We want our graduates to develop flexible instructional design skills that can be applied to any technology-based learning situation.

**Master of Science in Instructional Systems & Learning Technologies**

The MS program prepares students to become practitioners in the ISLT field. It requires a minimum of 36 credit hours of coursework including an internship and can be completed in two years. The degree is offered both on campus and online. Non-Florida residents (including international students) accepted to the online MS program may be eligible for reduced tuition.

The MS program in ISLT is competency-based. As their capstone experience, students are evaluated using a portfolio. In their portfolios, students discuss the knowledge and skills they have developed in each of seven competency areas (Table 1) and provide evidence from their coursework or other professional experience. Additionally, students include a personal statement discussing their career trajectory and goals along with a current resume. Faculty reviewers provide graduating students with formative and summative feedback on their portfolios, helping students to present themselves effectively to future employers as well as to identify suitable future employment options and areas for continued professional development and growth. Many ISLT graduates have noted the important role this portfolio has played in helping them secure a job.

**Doctor of Philosophy in ISLT**

The PhD program in ISLT prepares students for careers as university faculty members, research scientists, and leaders in learning departments and organizations. In addition to acquiring the competencies addressed in the MS program, the PhD program prepares students to conduct and interpret research. PhD students complete coursework in advanced instructional design, research design, and quantitative and qualitative methods, and round out their program of study with a focus area. The focus area consists of a set of advanced ISLT and inquiry courses selected with the assistance of their advisor, which help the students to develop a particular expertise in an ISLT area. For example, a student might select advanced courses in change management, evaluation, and performance-systems analysis to develop expertise in performance improvement, or courses in learning analytics, social media, and internet-based inquiry to develop expertise in learning technologies.

The PhD program has several important milestones, each designed both to assess student knowledge and preparation and to provide opportunities for feedback and to set incremental goals for the students’ learning process and professional development. At the end of the first two terms of study, PhD students complete a qualifying exam. This exam consists of a student-developed portfolio consisting of a curriculum vitae, goal statements, self-assessments, and a program of study. The student then presents this portfolio to the faculty and receives formative feedback on his or her progress in the program to date. During their coursework, students must both complete a research apprenticeship and satisfy a publication requirement. These experiences, which occur in close mentorship and often collaboration with the student’s advisor, help develop the student’s research, writing, and presentation skills and provide a supported opportunity for learning about scholarship in a professional context.

At the conclusion of coursework, immediately prior to working on their dissertation prospectus, PhD students take a two-part preliminary exam. The first part is focused on the application of theory and technology to an instructional design problem, and the second part involves the development of a brief research proposal that is presented and defended in front of the student’s doctoral committee.
<table>
<thead>
<tr>
<th>Competency Area</th>
<th>Skills</th>
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</table>
| **Communication** | • Communicate effectively in written, oral, and visual formats.  
• Produce clear, concise, and grammatically correct messages.  
• Produce visuals that adhere to the principles of message design.  
• Deliver effective and engaging presentations.  
• Facilitate meetings to achieve agenda and goals.  
• Use appropriate tools to communicate with learners, clients, and other stakeholders.  
• Apply effective questioning and facilitation techniques.  
• Practice active listening. |
| **Analysis** | • Analyze learning and performance problems to recommend appropriate solutions.  
• Use a variety of analysis practices such as performance-system analysis; needs assessment; goal, task, learner, and context analysis.  
• Use appropriate data collection methods and tools to conduct analyses.  
• Determine subordinate and prerequisite knowledge and skills.  
• Analyze content from a variety of human and non-human sources.  
• Use analytics to address learning and performance questions.  
• Estimate costs and benefits for proposed solutions.  
• Write analysis reports and disseminate findings to stakeholders. |
| **Design** | • Apply learning theory and systems thinking to design practice.  
• Design interventions to address learning and performance.  
• Design a curriculum, program, or learning solution.  
• Work with subject-matter experts and other team members to design interventions.  
• Align outcomes, strategies, and assessments.  
• Generate appropriate instructional strategies and activities.  
• Apply interaction design principles.  
• Design assessments to measure learning and performance.  
• Identify the scope and sequence for instructional solutions.  
• Use visual design principles appropriately.  
• Generate design documents and disseminate findings to stakeholders.  
• Select, modify, or create effective design models.  
• Provide a rationale for design decisions. |
| **Technology & Media** | • Select and use appropriate technology and media for specific outcomes.  
• Develop instructional materials using a variety of media (e.g., print, audio-visual, multimedia).  
• Develop and use web-based instruction, e-learning, social media, and content management tools.  
• Analyze the characteristics of existing and emerging technology.  
• Use technology correctly for professional communication purposes.  
• Use technology tools in the design process.  
• Analyze the cost and benefit of technology and media use.  
• Provide a rationale for technology and media decisions. |
| **Evaluation & Research** | • Design and develop evaluation and evaluation plans.  
• Conduct a formative evaluation of an instructional intervention.  
• Write proposals for evaluation and research projects.  
• Apply appropriate qualitative and quantitative data collection methods.  
• Construct valid and reliable data collection tools.  
• Collect, analyze, and summarize data. |

(Continued)
Once a student has successfully completed this exam and advanced to candidacy, the student completes and defends a dissertation prospectus, which serves as the blueprint for an empirical study, and then conducts the research and defends the final dissertation.

Table 2 provides a sample of recent dissertation titles. These dissertations represent a diverse range of topics within the ISLT field, and include quantitative, qualitative, and mixed-methods research approaches. Full copies of FSU dissertations can be accessed online via FSU’s digital repository, DigiNole (http://diginole.lib.fsu.edu).

Student engagement is another important part of the ISLT and FSU student experience. The PhD program involves more than just a collection of courses followed by a dissertation; students are expected to be involved in extracurricular activities at various levels (program, college, university, and profession), in a manner appropriate to their trajectory within the program. New PhD students are expected to participate in the faculty-led research groups, attend program-sponsored activities, and explore professional development opportunities offered across campus and by professional organizations. By the mid-point of their time as a PhD candidate, if not earlier, students are expected to be assisting with the organization and leadership of activities within the program or elsewhere on campus and to begin presenting at conferences and publishing in academic venues. As their time as a PhD candidate nears its end, students are likely to have become active members of any number of professional organizations, including the American Educational Research Association (AERA), the Association for Educational Communications & Technology (AECT), the Association for Talent Development (ATD), the International Society for Performance Improvement (ISPI), and the Korean Society for Educational Technology (KSET).

GRADUATE CERTIFICATES

The ISLT program also offers graduate certificates in human performance technology (HPT) and online instructional development (OID). Each certificate program requires a minimum of 15 credit hours of coursework and can be completed on campus or online. Graduate certificates may be earned in addition to a graduate degree or as a stand-alone certificate. Many students have used the certificate program as a low-commitment opportunity to determine whether further study in ISLT is
TABLE 2  Sample of Recent Dissertation Titles

<table>
<thead>
<tr>
<th>Title</th>
<th>Student</th>
<th>Year</th>
<th>Major Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of faded scaffolding in computer-based instruction on learners’ performance, cognitive load, and test anxiety</td>
<td>Hao, Shuang</td>
<td>2016</td>
<td>Dennen</td>
</tr>
<tr>
<td>Role assignment and sense of community in an online course</td>
<td>Jiang, Wenting</td>
<td>2016</td>
<td>Dennen</td>
</tr>
<tr>
<td>The effects of representation format in problem representation on qualitative understanding and quantitative proficiency in a learning game context</td>
<td>Lee, Sungwoon</td>
<td>2016</td>
<td>Ke</td>
</tr>
<tr>
<td>The business of informal learning: A survey of instructional design and performance improvement</td>
<td>Moore, Alison</td>
<td>2016</td>
<td>Klein</td>
</tr>
<tr>
<td>Competencies for instructional designers: A view from employers</td>
<td>Kelly, Wei</td>
<td>2016</td>
<td>Klein</td>
</tr>
<tr>
<td>How university students contribute to group work: Using a structural equation modeling approach</td>
<td>Joo, Minho</td>
<td>2015</td>
<td>Dennen</td>
</tr>
<tr>
<td>Assessing job negotiation competencies of college students using evidence-centered design and branching simulations</td>
<td>Masduki, Iskandaria</td>
<td>2015</td>
<td>Shute</td>
</tr>
<tr>
<td>The effects of argumentation scaffolding in a problem-based learning course on problem-solving outcomes and learner motivation</td>
<td>McGee, Marilyn</td>
<td>2015</td>
<td>Shute</td>
</tr>
<tr>
<td>Exploring the effectiveness of collaborative assessment preparation with immediate feedback in an intensive adult English as a Second Language classroom</td>
<td>Peters, Sabine</td>
<td>2015</td>
<td>Klein</td>
</tr>
<tr>
<td>Search for the optimal balance among learning, psychometric qualities, and enjoyment in game-based assessment</td>
<td>Kim, Yoon Jeon</td>
<td>2014</td>
<td>Shute</td>
</tr>
<tr>
<td>An examination of self-regulated learning and professional growth within online, informal communities of practice</td>
<td>Myers, Jennifer</td>
<td>2013</td>
<td>Dennen</td>
</tr>
<tr>
<td>Example of postings’ effects on online discussion and cognitive load</td>
<td>Jin, Li</td>
<td>2012</td>
<td>Darabi</td>
</tr>
<tr>
<td>Exploring students’ mapping behaviors and interactive discourses in a case diagnosis problem: Sequential analysis of collaborative causal map drawing processes</td>
<td>Lee, Woon Jee</td>
<td>2012</td>
<td>Jeong</td>
</tr>
<tr>
<td>Examining the use of First Principles of Instruction by instructional designers in a short-term, high volume, rapid production of online K-12 teacher professional development modules</td>
<td>Mendenhall, Anne</td>
<td>2012</td>
<td>Johnson, Klein</td>
</tr>
<tr>
<td>The effect of instructional interventions on undergraduate students’ responsiveness to online course evaluations and the quality of their feedback</td>
<td>Wise, Jean-Marc</td>
<td>2011</td>
<td>Dennen</td>
</tr>
</tbody>
</table>

what they seek, whereas others have used the certificates as a means of updating their knowledge and skill set.

ISLT PEOPLE

Faculty

The ISLT program is comprised of six tenured faculty members and two long-term adjuncts who have made significant contributions within the MS program, bringing their professional expertise as practitioners to our classrooms. The dean of the college of education, Marcy Driscoll, is also a faculty member in the program. Although she is not currently teaching classes for the program, she regularly serves on doctoral dissertation committees. Table 3 shows a list of the current ISLT faculty, their ranks, their doctoral institutions, their scholarly interests, and the courses they commonly teach.

The ISLT faculty members are active scholars. They regularly publish books, journal articles, and book chapters and present their research internationally. The following list shares some recent faculty publications (faculty names appear in bold, student collaborators in italics):

- Darabi, A., Pourafshar, S., Suryavanshi, R., & Arrington, T.L. (2016). Comparison of three instructional strategies in food and nutrition education on
# Current ISLT Faculty and Interests

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>PhD Institution</th>
<th>Rank/Title</th>
<th>Scholarly Interests</th>
<th>Core Teaching Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aubteen Darabi</td>
<td>Florida State University</td>
<td>Associate Professor (joint with Learning Systems Institute)</td>
<td>Strategies for complex cognitive skills, training, and non-instructional interventions in organizations</td>
<td>Evaluation of training, needs analysis, systems thinking</td>
</tr>
<tr>
<td>Vanessa Dennen</td>
<td>Indiana University</td>
<td>Professor</td>
<td>Communities of practice, instructional design for emerging technologies, social media, learning and interaction analytics</td>
<td>Inquiry, learning theory, learning technologies</td>
</tr>
<tr>
<td>Marcy Driscoll</td>
<td>University of Massachusetts at Amherst</td>
<td>Dean and Leslie J. Briggs Professor of Educational Research</td>
<td>Learning, instructional theory, education policy</td>
<td>Learning theory</td>
</tr>
<tr>
<td>Allan Jeong</td>
<td>University of Wisconsin</td>
<td>Associate Professor</td>
<td>Computer mediated communication, computer supported collaboration</td>
<td>Instructional development, online learning and collaboration</td>
</tr>
<tr>
<td>Fengfeng Ke</td>
<td>Pennsylvania State University</td>
<td>Associate Professor</td>
<td>Virtual worlds, gaming, simulations, computer supported collaboration</td>
<td>Instructional design, multimedia and game design</td>
</tr>
<tr>
<td>James Klein</td>
<td>Florida State University</td>
<td>Walter Dick Distinguished Professor of Instructional Systems Design</td>
<td>Strategies for active learning, performance improvement, and design and development research</td>
<td>Instructional systems design, performance system analysis, research on ISLT</td>
</tr>
<tr>
<td>Val Shute</td>
<td>University of California, Santa Barbara</td>
<td>Mack and Effie Campbell Tyner Endowed Professor of Education</td>
<td>Immersive games, stealth assessment, 21st century competencies</td>
<td>Inquiry, learning theory</td>
</tr>
<tr>
<td>Darren Brooks</td>
<td>Florida State University</td>
<td>Adjunct Faculty</td>
<td>Human resource development</td>
<td>Change management, performance improvement, project management</td>
</tr>
<tr>
<td>Kerry Burner</td>
<td>Florida State University</td>
<td>Adjunct and Instructional Development Faculty</td>
<td>Online learning, social media use in higher education</td>
<td>Learning theory, instructional design</td>
</tr>
</tbody>
</table>


- **Dennen, V.P.** (2015). Technology transience and learner data: Shifting notions of privacy in online learning. *Quarterly Review of Distance Education*, 16(2), 45–59.
Students

The ISLT program typically maintains an active enrollment of around 70 to 75 MS students and 50 PhD students. Most campus MS students are enrolled full time and complete their degrees in four to five semesters. Most online MS students are employed full time while earning their degree and enroll in one or two courses at a time. PhD students are typically enrolled full time and on average complete coursework in 2.5 years and then complete their dissertations in another 2 to 3 years.

Students enrolled in our program represent diverse backgrounds. Common undergraduate degree areas for applicants include communications, education, human resource development, or psychology, although we enroll students with backgrounds ranging from the fine arts to the hard sciences. Our students hail from the United States and several other countries, including Australia, Canada, China, Indonesia, Italy, Malaysia, Singapore, South Korea, and Turkey. Several are active-duty military personnel or veterans. Students range in age and experience from recent college graduates who are seeking increased employment opportunities and individuals with prior experience in other fields looking to transition to another career to seasoned professionals already working as instructional designers or performance improvement practitioners.

ISLT students are highly accomplished and active within the field. In addition to presenting at conference and publishing in journals, PhD students frequently have been finalists and winners of the AECT PacifiCorp Design and Development competition.

Alumni

ISLT alumni work in a variety of settings, including large and small corporations, colleges and universities, government agencies, consulting firms, health care, the military, and public schools. Graduates are employed in organizations such as AT&T, Coca-Cola, State Farm, the University of South Florida, the Center for Disease Control, the Federal Reserve Bank, the U.S. Coast Guard, and the Singaporean Army.

The ISLT program has a particularly strong alumni network, with leadership from the ISLT alumni advisory council (ISLT-AAC). ISLT-AAC members serve the program by mentoring students, making professional development presentations both on campus and online, assisting with internship and job placement, and raising funds in support of the program. Each spring, a group of alumni returns to FSU to participate in a one-day mini-conference. At this event, alumni interact with students by facilitating professional development activities. Additionally, alumni use several social networking sites to maintain connections with each other and engage in professional-development activities.

FACILITIES

The ISLT program is housed in the Mode L. Stone education building along with most of the other education degree programs at FSU. The program has a dedicated multimedia studio, featuring laptops that may be checked out, a gaming area, an instructor station, and a configurable workspace. Additionally, the college of education maintains a technology Sandbox with a Smart interactive projector and a 3D document camera, Smartboard, Google Glass, Oculus Rift, Sphero, OSmo, Wii, a
gaming area, and a collection of tablets, e-readers, smart pens, and other small technologies. The Sandbox has an ongoing commitment to obtaining new technologies for student and faculty use. The college has two computer labs and provides virtual software access to FSU students.

**GEOGRAPHICAL CONTEXT**

The program’s location, in Florida’s capital city, provides students with excellent opportunities for internships, employment, consulting, and research partnerships. Many students intern with state agencies or the two other local higher education institutions—Florida A&M University and Tallahassee Community College. These internships often turn into job offers. K-12 opportunities for internships and research are available both with the local school district and at FSU’s K-12 lab school, whose diverse student body serves as a microcosm of Florida’s population. Additionally, Tallahassee has both an active makerspace community and a business incubator.

Tallahassee is a growing city with an active arts community in addition to the university-supported sports culture. Tallahassee is also well situated for nature lovers and outdoor-activity enthusiasts, with its rolling hills and canopied streets. The city and immediately surrounding area are rich with parks, hiking and biking trails, and lakes and rivers for canoeing and kayaking. The city is a short drive from the white sand beaches of Florida’s Gulf Coast.

**FUTURE DIRECTIONS**

Looking ahead, the ISLT program at FSU remains focused on providing our students with strong, experience-based preparation for careers in instructional systems, performance improvement, and learning technologies. Our program is committed to maintaining a solid core curriculum within the field while at the same time being sufficiently agile to build strengths in new areas that reflect current business and research opportunities. Our faculty members foster that agility through their scholarly and creative activities and by using a systems approach to examine the interrelationship of research, practice, and teaching.

**FOR MORE INFORMATION**

Readers who want more information about the ISLT program at FSU should visit [http://education.fsu.edu/degrees-and-programs/instructional-systems-and-learning-technologies](http://education.fsu.edu/degrees-and-programs/instructional-systems-and-learning-technologies). Information about past and current events can be found on our program blog at [http://isfsu.blogspot.com](http://isfsu.blogspot.com) and by following us on twitter (@ISLT_FSU). Additional information about how to apply to ISLT at FSU can be obtained by contacting Ms. Mary Kate McKee at mmckee@fsu.edu or (850) 644–8776.

**References**

Florida State University (2016). About Florida State. Retrieved from [https://www.fsu.edu/about/history.html](https://www.fsu.edu/about/history.html)

Reiser, R., Dick, W., Klein, J., & Dennen, V. (2012, November). Florida State University instructional systems program—Past, Present and future: Values, beliefs and practices that have influenced the program. Presidential session presented at the annual meeting of the Association for Educational Communications and Technology, Louisville, KY.