

## **A Degree in IDT by Any other Name is Still a Degree in IDT – But Is It?**

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In a recent symposium at Pennsylvania State University (PSU, fall 2003), several professors of instructional design and technology met to discuss the future of the field. Three days of discussion and reflection led us to propose a session at AECT focused around the following question: Where are we going and how will we get there? Each of us chose a different lens from which to answer this question.

My lens focused around learners enrolled in IDT program. Specifically, I sought to answer the following question: what are we (professors of IDT) hoping students will be able to do when they finish the degree programs? In other words, what is the purpose(s) and/or goal(s) of IDT programs? My hope is that in exploring this question we will gather useful information for revising and expanding out degree programs.

This paper will present and discuss the results of an initial study seeking to answer the question about purposes and goals of IDT programs. I will first present a brief overview of IDT as an academic discipline. Next, I will describe the methodology I used to gather the data. The section that follows methodology will present and discuss the results. Finally, I will explore implications for IDT programs, seeking to provide guidance for continued growth of the profession.

### **A brief historical overview of IDT as an academic discipline**

The use of technology for instructional purposes can be dated back to the turn of the 20<sup>th</sup> century with the use of film for teaching (McNeil, 2004). It is also important to note that one of the most influential organizations, the Association for Educational Communications and Technology (AECT), traces its roots back to 1923. Most scholars trace the practice of IT to the 1940s and the training developments for the military in World War II. It was during this time that the term “instructional technologist” first started being used (Reiser, 2001).

IDT continued to grow throughout the 1950s and 1960s, with the development of instructional design models and evaluation. The study of IT and the rise of IDT as a formal academic discipline did not occur until the late 1960s and early 1970s. This is when academic programs in IDT started to form at major institutions in the United States. For example, the Instructional Systems Design program was formed at The Florida State University in Tallahassee and Instructional Systems and Technology was formed at Indiana University in Bloomington at this time (see, for example, Indiana’s departmental timeline for details, <http://www.indiana.edu/~ist/students/history/timeline.html>).

It is difficult to gather information related to the goals and objectives of the academic programs in the 1960s/1970s. However, the naming of the program at Indiana University provides some insight into where emphasis was placed with IST at IU. As stated on the departmental timeline:

The word "instructional" was chosen because instruction and instructional management as they are affected by technological processes are the main concern of the division. While applications of technology to non-instructional aspects of education...are of interest, they do not represent prime areas of research and development.

"Systems" in the title suggests both methodology and levels of operation. As methodology, "systems" reflects the application of behavioral and cybernetic principles to the design of instruction and instructional programs that are replicable both in terms of stimuli and the effects of student interaction with those stimuli. The relationships between components of the system and between components and the system as a whole must be specified, monitored, and controlled in order to achieve stated goals. The concept of systems may be applied at different levels of operation. ... Thus, the division is interested in course as well as instrument development.

"Technology" is used in three interrelated ways...a way of solving problems. Second, the application of technological processes results in technological products which assure replicability. ... The third refers to the environment and structure of education in terms of facilitating or inhibiting technological solutions to instructional problems...In summary, "technology" to the division means process, product and a facilitating environment that makes the first two not only possible but also desirable.

One may summarize the following as a goal of the IST program at IU (then a division): to teach learners instructional management techniques using a systems perspective for solving problems using technology. The memo from which the quote was taken was written in 1969 by Bob Heinich. One might also assume that it is a reflection of cultural needs at the time – and indeed in looking at the larger timeline, the reader can certainly see how this developed. The question that arises: have IDT programs continued to reflect cultural needs?

Clearly, academic programs have been in existence for several decades. As Reiser (2001) indicates, there have been many changes in the structures and culture in which IDT operates. My interest in paper is to explore current goals of programs so that we can start building an understanding of how these goals may or may not be in alignment with current needs of our society in relation to IDT.

## **Methodology**

### *Participants*

To help inform the answer to the question, I searched the Web sites of the institutions represented in our ID Future meeting at PSU in the fall of 2003. In alphabetical order (national and international), these included:

#### United States

- The Florida State University  
<http://www.epls.fsu.edu/is/>
- Indiana University  
<http://www.indiana.edu/~ist/>
- Pennsylvania State University  
<http://www.ed.psu.edu/insys/>
- The University of Georgia  
<http://it.coe.uga.edu>

- Utah State University  
<http://it.usu.edu/>

#### International

- University of Saskatchewan  
<http://www.usask.ca/education/edcur/edcomm/index.htm>

#### *Data Sources and Analysis*

I focused on two primary areas of information for data gathering: (1) published mission or purpose statements for the IDT programs and (2) information on degrees offered. For this study, the mission or purpose statements were defined as the information found on the first page of the Web sites or under links with titles like “about this program.” Within the category of degrees offered, I gathered data on the level of the degrees offered (i.e., master’s, specialist, doctoral) and area of focus for the degrees (e.g., instructional development, school library media).

The data were copied from the program Web sites and put into a table to facilitate analysis (see Appendix A for a full report of all the data). The data were read several times and themes were generated based on the review of the information gathered. The results are presented in the following section.

#### *Limitations*

It should be noted that this is a small sample of academic programs in IDT. Further, it should be noted that a limited number of variables were taken into account for answering the question posed (what are we (professors of IDT) hoping students will be able to do when they finish the degree programs?). Future research should expand in both areas.

### **Results**

#### *Mission or Purpose Statements*

Each program had some form of a mission or purpose statement on their program Web site (see Table 1). All of the statements mention that graduates can go into a variety of settings to apply their skills. Some, like the statement from UGA, are more general in their presentation stating that the program “...prepares students to improve education in a wide variety of settings.” Others, like the statement from IU, include more specific examples of where students might go for employment after completion of the degree: “...institutions of higher education, but also in business, industry, government and ministries of education in other countries.”

Three of the six of the mission or purpose statements included information about the larger profession of IDT. For example, the statement from FSU provides information on the fields from which IS was built: “...draws upon the fields of psychology, communications and management...” The statement from PSU was the most detailed of all, providing a broad overview of what the learner might expect while studying in the program. The statement from Saskatchewan also provided detail about the field.

The other mission or purpose statements were not as detailed, but did provide some insight into what the learner could expect from the program. The statements from UGA and USU focused on emphasis areas in the programs (e.g., educational technology, information technology, school library media administration). The statement from IU was the only one that included a tag line: *We improve human learning and performance in diverse contexts.*

### *Degrees Offered and Areas of Emphasis*

Like the mission statements, the degrees offered and areas of emphasis vary across the six programs. The program at Saskatchewan is the only program that does not offer a doctoral degree. Saskatchewan does offer two master's degrees: one with a thesis option and one without. This is not unlike the master's degrees at the IDT programs in the United States, where some also have a thesis option (e.g., PSU).

All of the programs in the United States offer a master's degree in IDT. However, the type of master's degree varies, with two programs offering an M.S. (FSU, IU), two programs offering an M.Ed. or M.S. (PSU, USU), and one program offering an M.Ed. (UGA) (see Table 2 for a summary; Appendix A for a complete listing). Some of the degree descriptions for the master's level made a clear distinction between the two degrees. For example, the PSU master's degree descriptions indicate that: *The M.Ed. degree is a practitioner's degree. It is a more appropriate option for those who plan careers as instructional designers and technologists. ...The M.S. degree is a research degree.*

Three of the six programs offer a specialist degree (Ed.S.): FSU, UGA and USU. As with the master's degrees, the emphasis varies, but all are clear that the goal is to "...prepare students with advanced skills in instructional technology beyond those acquired with the master's degree" (USU Web site).

All of the programs in the United States offer doctoral degrees in the IDT programs. Four of the programs offer a Ph.D. only – FSU, IU, UGA and USU. Almost all of the program Web sites describe the focus of the Ph.D. as *research and theory*. PSU offers the option of a Doctor of Education (D.Ed.) or Ph.D., drawing the following distinction between the two: *The D.Ed. typically prepares students for advanced practitioner posts such as curriculum/technology coordinator for public schools, corporate lead instructional designer or consultant. Ph.D. degree typically prepares students for the professorate or research posts within labs or think tanks.*

In addition to traditional degrees, three of the programs (IU, PSU, UGA) indicated offering some form of certificate in IDT. The certificate at IU focuses on a basic grounding in IST, but is not licensed by the State of Indiana. The certificate at the University of Georgia is similar, providing a foundation in IT, but no licensure by the State of Georgia. PSU offers two certificates (technology specialist and technology supervisor), both of which are issued by the State of Pennsylvania Department of Education.

The areas of emphasis across the six programs are more varied than the degrees offered (see Table 2 for a full listing). Table 3 provides a tallied summary of the areas of emphasis.

### **Discussion and conclusion**

What are we hoping students will be able to do when they finish the degree programs?

An initial analysis of the mission/purpose statements and degree areas across six (6) IDT programs indicates a variety of purposes and goals in terms of what students will be able to do after completing their studies. The variety is particularly apparent at the master's level. Learners at the master's degree level are being prepared for a variety of professions, ranging from educational contexts (K-12 to higher education) to business and industry to government organizations.

The emphasis areas for the specialist degrees also vary. Learners can choose from school library media to distance education to evaluation. This also enables the learner to choose multiple contexts in which they can work after completing the degree – including education and business and industry.

The variety at the master's and specialist levels clearly reflects the variety of the profession. We have been accused of, and lauded for, being all things to all people. As stated several years ago by Hannafin and Hannafin (1986), the choice to be a field of “jack of all trades” has implications for our growth as a discipline. It would seem that we have continued this trajectory – and may still be suffering from the consequences of those decisions.

The greatest consistency in goals and purposes can be found at the doctoral level. All of the Ph.D. degrees stated that graduates will have the ability to conduct research and build theory in IDT. The types of positions available for learners after completing the degree do vary (higher education, business and industry, government), but the goals are consistent. It may be that this area offers the most promise for providing a collective trajectory for the IDT profession. That said, it may not be the desire of the IDT professoriate to have a collective trajectory. As indicated in the Hannafin and Hannafin (1986) article, this is a question that will need to continue to be explored – with an understanding of the benefits and challenges associated with either decision.

## References

Hannafin, M. J., & Hannafin, K. (1986). The status and future of research in instructional design and technology. *Journal of Instructional Development*, 8(3), 24-30.

McNeil, S. (2004). A hypertext history of Instructional Design. Available online:  
<http://www.coe.uh.edu/courses/cuin6373/idhistory/index.html>

Reiser, R.A. (2001). A history of instructional design and technology: Part II: A history of instructional design. *Educational Technology Research & Development*, 49(2), 57-67.

Table 1. Mission or purpose statements

Institution	Mission/Purpose Statement
FSU Instructional Systems	<p>The field of Instructional Systems is concerned with the improvement of educational and training programs through the application of research and technology. Instructional Systems is a relatively new area of specialization which draws upon the fields of psychology, communications and management in order to improve human performance.</p> <p>While materials development and the utilization of technology are core skills in the curriculum, students in the Instructional Systems program also study the theoretical basis for, and receive applied training in, the total design, development, implementation, and management of education and training programs. Skill areas range from needs assessment and job analysis through system design and evaluation. The use of computers in performance improvement receives significant emphasis in the program.</p>
Indiana University Instructional Systems Technology	<p>We improve human learning and performance in diverse contexts.</p> <p>The Department of Instructional Systems Technology prepares practitioners and researchers to build and test processes, products, systems and services for use in education and training settings. Graduates of our <i>master's</i> degree program typically assume design/development roles in public or private organizations -- about half in corporations. Graduates of our <i>doctoral program</i> teach and conduct research in instructional technology -- most often in institutions of higher education, but also in business, industry, government and ministries of education in other countries.</p>

Institution	Mission/Purpose Statement
Pennsylvania State University Instructional Systems	<p>Instructional Systems graduates are applied psychologists, applying what is known about how people learn to most effectively and efficiently design systems that support learning. Instructional Systems students are encouraged to take courses on learning theory from the <b>Psychology</b> and the <b>Educational Psychology</b>. Instructional Systems graduates are prepared to be <b>instructional designers</b>. Instructional designers analyze learner needs and learning environments; design and sequence learning tasks; and design and develop effective and efficient learning materials. Developing instructional materials requires knowledge of the strengths and weaknesses, costs, and development time required by various instructional technologies. This knowledge allows graduates to make sound decisions concerning the technologies most appropriate to support learning. Technologies which are emphasized in the INSYS program include computer hardware, software and the Internet. Instructional Systems graduates are not computer scientists; they are computer users and appliers of computer technologies, such as multimedia, interactive video, and computer tools, to support learning. <b>Assessment and evaluation</b> of learner performance and instructional materials allows the graduate student to assess and improve the quality of his or her educational and training designs.</p>
University of Georgia Instructional Technology	<p>At the University of Georgia, Instructional Technology is a professional program in education and the learning process that prepares students to improve education in a wide variety of settings. Its programs emphasize instructional design and development, materials production and utilization, computer-based education, school media services, technology integration, and research.</p>
Utah State Instructional Technology	<p>The department offers specializations in Educational Technology, Information Technology, School Library Media Administration, Instructional Development for Training and Education, and Interactive Learning Technologies. A program emphasis in online learning communities in education and training is also offered.</p> <p>Minors Offered: Multimedia Development Minor            Certificates Offered: School Library Media            Endorsements Offered: Distance Learning Endorsement</p>

Institution	Mission/Purpose Statement
University of Saskatchewan Educational Communications and Technology	The Educational Communications and Technology graduate program includes research, study and practice in designing, developing and evaluating educational systems and resources. Typically, educational technologists are concerned with innovative ways of bringing technology to bear on learning problems. Educational technology is multidisciplinary in nature, applying learning theory to the design of learning environments, the development of educational systems, and the improvement of educational communication through the appropriate use of resources. Careers in educational technology include distance education, instructional design, training, educational television, media education and computer-based learning. Our graduates have followed careers in education, government, and corporate sectors, and some have started their own consultancies and businesses.

Table 2. Degrees offered and areas of emphasis

Institution	Degrees Offered	Emphasis Areas	Additional Information
FSU	Master's (MS)	FSU's Instructional Systems Program is one of the best ones in the field of Instructional Systems and Technology. Our master's programs offer a variety of opportunities to explore the field and find out what best meets the students' needs and career goals. Areas of study: Instructional Systems, Performance Systems Design, Open and Distance Learning	Core Competencies <ul style="list-style-type: none"> <li>• Communication and leadership</li> <li>• Design</li> <li>• Evaluation and research</li> <li>• Implementation</li> <li>• Management</li> <li>• Media and technology</li> </ul>
	Specialist	The Specialist degree in Instructional Systems provides advanced training for those who already hold a Masters degree.	
	Doctoral	<i>No specific description available.</i>	

Institution	Degrees Offered	Emphasis Areas
IU	Certificate	The Certificate does not confer a state licensure for teaching in the public schools nor at this time is it a certification that appears on your transcript. Rather it is a certification issued by the School of Education indicating that the courses on your transcript reflect a basic grounding in
	Master's (M.S.)	The Instructional Systems Technology (IST) Master of Science in Education (M.S.) degree program is designed for individuals seeking to be practitioners in the field of instructional technology. Students learn to build and test processes, products, and services that are ready for operational use in education and training settings. M.S. program graduates typically assume design and/or development roles in public or private agencies and organizations involved in one or more aspects of instructional technology.
	Doctoral (Ph.D.)	The Instructional Systems Technology Doctor of Philosophy in Education degree program is designed for individuals seeking to be researchers in the field of instructional technology. The IST program prepares Ph.D. students to discover new knowledge through basic research and answer specific questions about practical problems through applied research. Ph.D. program graduates typically conduct research and teach in university settings or work as researchers within private or public research and development centers involved in instructional technology.

Institution	Degrees Offered	Emphasis Areas
PSU	Master's (M.Ed./M.S.)	<p>The M.Ed. degree is a practitioner's degree. It is a more appropriate option for those who plan careers as instructional designers and technologists. Upon completion of the Master of Education Program the graduate will be able to:</p> <ul style="list-style-type: none"> <li>* discuss learning processes and implications for the development of effective instruction</li> <li>* conduct comprehensive needs assessments identifying important learner, environmental, and task characteristics</li> <li>* develop effective instructional materials for a variety of learning tasks, student characteristics, and learning environments</li> <li>* evaluate the effectiveness of educational materials</li> <li>* apply these skills to corporate in school environments</li> </ul> <p>The M.S. degree is a research degree. In addition to the objectives for the M.Ed., the Master of Science graduate will be able to:</p> <ul style="list-style-type: none"> <li>* pose and answer important learning-related questions requiring basic research and statistical competence</li> <li>* design and implement research studies</li> </ul>
	Certificate	<p>The Instructional Systems Program also offers two programs leading to professional certificates issued by the Pennsylvania Department of Education. Students who are just beginning a graduate program can plan to complete the Instructional Technology Specialist certification requirements or the Instructional Technology Supervisor certification requirements and a master's degree simultaneously. Students may also work toward certification without pursuing a graduate degree.</p>

Institution	Degrees Offered	Emphasis Areas
PSU	Doctoral (D.Ed. Ph.D.)	The D.Ed degree is focused on the practice of Instructional Systems and the application of research to real world contexts. The D.Ed. typically prepares students for advanced practitioner posts such as curriculum/technology coordinator for public schools, corporate lead instructional designer or consultant. Ph.D. degree typically prepares students for the professorate or research posts within labs or think tanks. The Ph.D. is focused on research and will train you to become a researcher capable of adding new knowledge within the field of Instructional Systems.

Institution	Degrees Offered	Emphasis Areas
UGA	Certificate	<p>This five-weekend certificate program is designed for people who want a solid understanding of instructional design and technology. The certificate follows a project based learning design. Participants will choose a project that is meaningful to them and follow it through the ADDIE model of Analysis, Design, Development, Implementation and Evaluation.</p> <p>Participants will develop:</p> <ul style="list-style-type: none"> <li>*A basic project management plan for the project</li> <li>*An analysis plan that will be carried out on the project</li> <li>*An evaluation plan for your project.</li> <li>*A design document detailing the design of the training</li> <li>*Computer skills in either Macromedia Flash or Dreamweaver</li> <li>*A small prototype of training materials</li> </ul>
	Master's (M.Ed.)  Instructional Design and Development	<p>The Instructional Design &amp; Development Master's Degree program in Instructional Technology provides students with knowledge of available computer and multimedia technology and its application, especially in higher education and training situations. Our goal is to prepare professionals who are current in the systematic analysis of learning and performance problems, and the design and development of effective instruction.</p>

UGA	Master's (M.Ed.) I School Library Media  Technology Integration	<p>The School Library Media Master's Degree program in Instructional Technology provides individuals with professional level skills in the organization and application of resources to the solution of instructional problems within schools (K-12 certification in school media is possible) who are current in the systematic analysis of performance problems, and design of effective instruction.</p> <p><b>Objectives</b> School Library Media program provides opportunities for students to develop:</p> <ol style="list-style-type: none"> <li>1.The basic knowledge and skills necessary to design, produce, and use a variety of media and materials in instructional settings; to administer and guide the use of information services; and to organize, evaluate, and administer instructional resources and media services.</li> <li>2.An understanding of the school curriculum, how students learn, and the role of materials in instruction.</li> <li>3.Skills in the process of instructional and curriculum development.</li> </ol> <p><b>Technology Integration</b> The curriculum is designed to provide educational practitioners with the skills, knowledge, and experience to effectively use technology to enhance teaching and learning for all students. This is not a technical skills oriented program, but, rather, is intended to build on a candidate's existing technical skills to effectively integrate technology into classroom practice.</p> <p><b>Goal</b> Our goal is to assist educators to effectively use technology to enhance teaching and learning in Georgia schools (P-16).</p>
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Institution	Degrees Offered	Emphasis Areas
UGA	Specialist (Ed.S.)  School Library Media  Technology Integration	<p>The Specialist Degree in Instructional Technology (Ed.S) emphasizes one of two tracks: either the School Library Media program or the preparation of Technology Coordinators. For SLM, Ed.S programs are available for certified and uncertified candidates, leading in both cases to S6 certification.</p> <p><b>Objectives</b></p> <p>The Specialist degree provides individuals with advanced skills necessary to function in an instructional leadership role within K-12 schools and school systems and to cope with today's changing technologies as school-based technology managers.</p> <p>The Specialist degree provides opportunities for students to:</p> <ol style="list-style-type: none"> <li>1. Expand their knowledge and skill in the design, production, and use of media and materials; information services; and the organization, evaluation, and administration of media services developed at the master's level of certification.</li> <li>2. Develop skills in leadership, supervision, and group dynamics.</li> <li>3. Apply skills in planning, developing, and evaluating instructional strategies and resources.</li> </ol>

Institution	Degrees Offered	Emphasis Areas
UGA	Doctoral (Ph.D.)	<p>The purpose of the Ph.D. program in Instructional Technology is to prepare individuals to conduct research and scholarly inquiry into the design and development of instructional systems and materials.</p> <p><b>Objectives</b>  The program enables students to produce new knowledge, generate solutions to problems, and disseminate information through teaching, training, and the professional literature.</p> <p>This Ph.D. program provides opportunities for students to:</p> <ul style="list-style-type: none"> <li>*analyze, develop, distribute, operate, and evaluate instructional systems and materials.</li> <li>*prepare to teach, develop theory, and conduct research related to instructional systems and materials.</li> </ul>

Institution	Degrees Offered	Emphasis Areas
USU	Master's (M.Ed./M.S.)	<p>M.S. The goal of the Instructional Development Program is to prepare individuals for careers in instructional design, development, and education. Positions range from highly design-oriented jobs requiring extensive instructional development skills, to product-development oriented jobs requiring skills in media production. This program prepares people to handle a variety of possible positions.</p> <p>M.Ed. The program is specifically designed for public school teachers and administrators who want to increase their understanding of the role of technology and its appropriate implementation in the teaching and learning process. The Education Technology (Ed Tech) Master's degree provides the privileges of advanced education with local access that can provide career advancement, peace of mind, and technical confidence. These benefits come from a program that intends to help its graduates be able to evaluate, integrate and implement various forms of technology and instructional design skills into their current teaching or administrative assignments.</p>
	Specialist (Ed.S.)	<p>Ed.S. The goal of the Educational Specialist (Ed.S.) program is to prepare students with advanced skills in instructional technology beyond those acquired with the master's degree. Students with this degree are prepared to assume leadership positions in industry, business, education, government and private organizations. The program focus is practical and applied but grounded in theory. Students may choose from four areas of emphasis: interactive instructional tool building, advanced interactive multimedia design, adult and distance education or evaluation.</p>

Institution	Degrees Offered	Emphasis Areas
USU	Doctoral (Ph.D.)	The Doctor of Philosophy (PhD) degree is designed for students seeking an academic career in higher education, research, or industry. The program focuses on research and theory building in instructional design and development.

Institution	Degrees Offered	Emphasis Areas
University of Saskatchewan	Post Graduate Diploma (PGD)	<p><b>Post Graduate Diploma (PGD)</b>  The PGD provides focused coursework without a required thesis or project. The PGD requires 30 credit units of graduate level courses but no thesis or project. Because of recent changes to the program, we are discontinuing the PGD program, but for those who meet PDG admission criteria but fall short of the criteria for admission to the M.Ed., we can recommend conditional admission to the M.Ed. program, subject to the successful completion of a specified number of courses in the program.</p>
	<p>Master of Education (non-thesis)</p> <p>Master of Education (thesis)</p>	<p><b>Master of Education (non-thesis)</b>  The M.Ed. (non-thesis) program provides theoretical and practical experiences culminating in a major scholarly project. The M.Ed. degree (non-thesis option) requires a minimum of 30 credit units of graduate level coursework and a project supervised by a faculty member in the programme and a committee. You can fill out an M.Ed. program planning form here.</p> <p><b>Master of Education (thesis)</b>  The M.Ed. (thesis) program provides theoretical and practical experiences culminating in a major research thesis. The M.Ed. degree requires a minimum of 24 credit units of graduate level coursework and a thesis supervised by a faculty member in the programme and a committee. You can fill out an M.Ed. program planning form here.</p>

Table 3. Summary of emphasis areas for degrees

Degree	Emphasis	Number of Institutions Offering the Emphasis
M.S.	Instructional Systems/Instructional Technology (broadly defined)	3
	Performance Systems Design	1
	Open and Distance Learning	
M.Ed.	Instructional Systems/ Instructional Technology (broadly defined)	2
	School Library Media	2
	Technology Integration	2
Ed.S.	Instructional Systems/ Instructional Technology (broadly defined)	1
	School Library Media	1
	Technology Integration	1
	Interactive instructional tool building	1
	Advanced interactive multimedia design	1
	Advanced interactive multimedia design	1
	Evaluation	1
D.Ed.	Instructional Systems/ Instructional Technology (broadly defined)	1
Ph.D.	Instructional Systems/ Instructional Technology (broadly defined)	4