Instructional Technology Specialist

I. Knowing the Content

The professional education program provides evidence that Instructional Technology Specialist certification candidates complete a program at a bachelor's or post-baccalaureate degree level that requires them to demonstrate their knowledge of and competence in the application of instructional technology in public school settings. The program requires candidates to demonstrate an understanding of the fundamental and advanced concepts of instructional technology planning and applications at elementary, middle, and secondary levels (K-12) including:

I.A. Identification, selection, installation and maintenance of technology infrastructure, and hardware and software applications for school administration and instruction including:

- assessment of educational and administrative technological needs,
- design and production of media including projected and non-projected visual aids, audio and video production in both analog and digital forms, and photography using film-based and digital formats,
- implementation and maintenance of interactive information systems, the Internet, distance learning technologies, and networks,
- assistive technology resources for students with special needs,
- evaluation of the performance of hardware and software components of computer systems,
- application of basic troubleshooting strategies

I.B. Integrating technology into curricular planning and instructional design including:

- research on and evaluation of existing and emerging technologies,
- use of instructional theories and teaching models,
- learner characteristics, developmental levels, and individual differences as related to instructional technology resources and modifications,
- access and use telecommunications for information sharing, remote information access and retrieval, and multi-media/hypermedia publishing,
- electronic mail and Internet resources for communications and instructional support

I.C. Management and administration of technology programs at the building, district and regional levels including:

- planning and utilization of facilities including, budgeting, accounting, and program reporting, grantsmanship, personnel administration, and staff development,
- preparing presentations for parents, administrators, school boards, and the public,
- monitoring and evaluating technology plans

I.D. Research, problem solving and product development of technological applications including:

- basic principles of instructional design associated with the development of instructional technology materials,
- emerging programming, authoring, and problem solving environments including team and collaborative projects such as on-line workgroups,
- designing and publishing on-line documents that present information and include links to critical resources

II. Performances

The professional education program provides evidence that competencies and exit criteria for Instructional Technology Specialist certification candidates are assessed in coursework, field experiences, portfolios from previous employment and an internship. The program also provides evidence that the candidates demonstrate their knowledge of and competence in the delivery of instructional technology services that enhance administrative and teaching capabilities and improve student learning through participation in sequential field experiences, practica, and an internship at diverse educational levels including:

II.A. Managing instructional technology services including:

- creating an environment that fosters interest and growth in all aspects of technology,
- establishing and maintaining rapport with all staff and students,
- communicating high learning expectations,
- creating a safe physical environment that is conducive to learning

II.B. Planning, preparation and delivery of technology related in-service programs and instruction in collaboration with other professionals at a variety of instructional levels that utilizes technology in problem solving based upon:

- Pennsylvania Academic Standards,
- strengths and needs of learners at all levels of technological proficiency,
- established technology implementation plans

II.C. Selecting, implementing and adapting technology to teaching methodologies, curriculum resources and administrative functions in collaboration with other educators and integrating a variety of software, applications, and learning tools

II.D. Selecting, developing and administering assessments that utilize technological applications and involve multiple indicators of student progress and using technology to maintain records on student achievement

II.E. Developing leadership techniques for working with all levels of the educational community and to manage and administer instructional technology programs at the building and district levels including:

- developing plans to assess the technological needs and resources, and to evaluate technology implementation and outcomes,
- developing plans to configure computer/technology systems and related peripherals in laboratory, classroom clusters, and other instructional and administrative arrangements,

- developing systems for the secure maintenance of student records

III. Professionalism

The professional education program provides evidence that Instructional Technology Specialist certification candidates demonstrate knowledge and competencies that foster professionalism in school and community settings including:

III.A. Professional organizations, publications and resources

III.B. Integrity and ethical behavior, professional conduct as stated in Pennsylvania's Code of Professional Practice and Conduct for Educators; and local, state, and federal laws and regulations

III.C. Collaborating with school colleagues to enhance student, teacher and administrative capabilities and improve student learning

III.D. Communicating effectively with parents/guardians, other agencies and the community at large to support learning by all students