



D17 From Researcher to Practitioner: Bridging the Technology Gap

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The goals of this presentation are to: (1) describe instructional design process to effectively deliver technical research data to forensic practitioners, (2) discuss multimedia options available for distribution to a wider audience, and (3) describe a suitable evaluation process to optimize technical transition of research data to practitioners.

This presentation will impact the forensic community and/or humanity by providing a model to facilitate future technical transfer training at the National Forensic Science Technology Center and the National Institute of Justice which effectively bridges the gap between researcher and forensic practitioner.

The National Institute of Justice (NIJ) sponsored the National Forensic Science Technology Center (NFSTC) to facilitate the transfer from researcher to practitioner of six emerging technologies with forensic applications. The training sessions provided instruction and presentation of research data for Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) for Forensic Toxicological analysis, Cedar Fox Questioned Document (QD) software for Handwriting analysis, Laser Microdissection in Forensic Biology applications, Clandestine Methamphetamine Analysis using Capillary Electrophoresis, and Polynomial Texture Mapping software for footwear and tire Impression examinations. The objective of each two day training session was to provide analysts with an overview of the theoretical and practical applications of the emerging technology. Laser Microdissection training was provided in two separate workshops with special focus for both analysts and laboratory managers.

The format for the workshop series was coordinated by a panel of NIJ staff, instructional designers, researchers, and laboratory staff. A primary directive given from the NIJ was to reach out to as many practitioners as possible to ensure that operational examiners may be aware of current research and technologies. This is somewhat limited with a classroom format and so it was decided that the series would be modeled on a blended approach. A classroom format was employed for each workshop with 12 to 16 practitioners in attendance. Each workshop took place in a recording studio set up at the NFSTC and was captured and edited to allow media based delivery. The edited workshop was made available via internet download together with instructional materials (curriculum, PowerPoint® lectures, and reading materials) for each workshop. This effectively allowed delivery free of charge to all interested parties.

Twelve to sixteen forensic examiners attended each workshop. Attendees were chosen by NIJ based on knowledge of intent to imminently incorporate the technology at hand into their laboratory protocols. While the primary objective was to make the information available as soon as possible, current instructional design principles were applied to the curriculum content. Instructional designers worked with each researcher to produce a detailed curriculum with corresponding objectives, reading material, and practical exercises. Each training workshop included theoretical lectures, demonstrations, practical exercises, and data interpretation exercises as applicable. Both classroom and laboratory activities were media captured. Training evaluation surveys were conducted at the conclusion of each training session, as well as three months after the training. The surveys were designed to assess the overall effectiveness of the training, the progress of individual laboratories in implementing the technology, and the impact of the workshop on laboratory implementation of the technology in question.

Initial evaluation responses obtained at the conclusion of each workshop indicated that attendees found it useful to learn of emerging technologies with potential for implementation in operational forensic laboratories. The majority of attendees indicated an interest in implementation, though with some modifications.

It is anticipated that this format will be used as a model to facilitate future technical transfer training at the National Forensic Science Technology Center and the National Institute of Justice. Experience has shown that this blended training format effectively bridges the gap between researcher and forensic practitioner.

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