



Questioned Documents - 2017

J24 The Background, Training, and Experience of Questioned Document Examiners: Present Practice and Future Directions

*Mara L. Merlino, PhD**, 1066 Tamworth Lane, Frankfort, KY 40601; *Tierra M. Freeman, PhD**, Kentucky State University, 231a Hathaway Hall, 400 E Main Street, Frankfort, KY 40601; *La'Quida Smith, MA**, Kentucky State University, 400 E Main Street, Frankfort, KY 40601; and *Ivan Duvall**, 106 Past Time Court, Frankfort, KY 40601

After attending this presentation, attendees will understand some of the principles of evidence-based learning as it relates to creating valid and reliable training in the field of questioned documents. Attendees will learn: (1) how to identify knowledge, skills, and abilities relevant to the field; (2) how to set training goals and objectives; (3) how to design training exercises that produce measurable results; (4) how to create assessments that demonstrate trainee success; and, (5) how to create benchmarks for determining competency.

This presentation will impact the forensic science community by demonstrating the importance of creating systematic and standardized training programs with empirical and measurable benchmarks demonstrating mastery and competence of trainees and by demonstrating methods and procedures that can be used to strengthen and evaluate training in a variety of forensic disciplines.

Current efforts to strengthen the reliability and validity of the methods and conclusions of various forms of pattern evidence and to validate the training methods of forensic practitioners have led to attempts to create standardized training programs that measure trainee progress and mastery, and are of consistent content, quality, and length. Efforts such as the National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees (OSAC) and working groups such as the NIST/National Institute of Justice (NIJ) Expert Working Group on Human Factors in Handwriting Examination were created to address needs for training, education, research, lab management, and a variety of other issues that are important in moving the field forward and ensuring that current practices are demonstratively the best practices.

Evidence-based practices are those based on significant and reliable evidence derived from empirical evaluation of training methods and procedures. Evidence-based practice is employed in classroom settings and policy making to ensure that learners receive the greatest possible benefit from learning experiences.

This paper will present the results of a recent survey of the education and training background of 97 professional document examiners, highlighting their views on current training and suggestions for improvement. The current movement toward an educational model of training standards and practices will be discussed.

Further discussion will center around creating training programs that incorporate the identification of relevant knowledge, skills, and abilities; creating measurable and objective course goals; specifying learning objectives that incorporate introductory, intermediate, and mastery level goals; creating valid and reliable measures of learning; and, creating objective and measurable benchmarks for determining training effectiveness. This discussion will include information about identifying constructs to be measured, how to measure the reliability and validity of assessment techniques and constructing standardized tests and measures.

Additionally, information is presented about designing evaluation research to investigate the extent of success of training programs. This discussion will include the importance of properly-conducted evaluation research which will provide both feedback to forensic trainers and empirical data to inform evidence-based practice.



Questioned Documents - 2017

During this presentation, there will be an interactive discussion with attendees to demonstrate how to create training module objectives, to establish trainee learning objectives, to identify various skills and training techniques, to create assessment measures which will operationalize learning outcomes, and to identify and operationalize observable and measureable benchmarks to demonstrate trainee proficiency on training tasks.

Finally, a discussion will be facilitated among the attendees about the strengths and weaknesses of time-based compared to competency-based training programs.

Training, Evaluation, Measurement