1. Describe general guidelines for teaching technical skills.

2. Recall the CLIA training and competency requirements.

3. Identify learning styles and how to develop effective tools to better reach the trainee.

4. Develop effective technical teaching tools such as training modules.

5. Identify on-line resources to be used as training tools.

ARUP LABORATORIES

1. <u>Know</u> the material
2. Be prepared
3. Minimize distractions
4. Pre-assess the learner
5. Set up expectations
6. Break it into component parts
7. Keep a logical sequence
8. Watch your body language
9. Listen and communicate
10. Give feedback and follow up

From: "Tips for Teaching Technical Skills" by Karen A. Brown, MS, MT(ASCP),

CLS and Barbara Bonke, MS, MT(ASCP)SI

- Under CLIA, anyone performing testing must have his or her competency assessed annually, and during the first year a person works in the lab, every 6 months.

- Competency assessment

  - is NOT the same as performance evaluation.

  - mirror the responsibilities of each person's role in the lab as defined by regulation.

- 6 elements of competency assessment for anyone performing testing, and all six must be documented for each person, each year.

Reference: Malone, B. (2013). Clinical Laboratory News,39(6)

- Not everyone can perform assessments.

- The supervisor may designate employees to perform assessments, however....

- One's ability to perform assessments depends on the complexity of testing, **and** only employees that meet the qualifications of:

  1. technical supervisor

  2. technical consultant

  3. general supervisor may perform the assessments.

- Set expectations, standards, and make employees accountable

Evaluating the competency of all testing personnel and assuring that the staff maintain their **competency** to perform test procedures and report test results promptly, accurately and proficiently. The procedures for evaluation of the competency of the staff must include, but are not limited to –

- **Direct observations** of routine patient test performance, including patient preparation, if applicable, specimen handling, processing and testing;

- **Monitoring** the recording and reporting of test results;

- **Review of intermediate test** results or worksheets, quality control records, proficiency testing results, and preventive maintenance records;

- **Direct observation** of performance of instrument maintenance and function checks;

- **Assessment of** test performance through testing previously analyzed specimens, internal blind testing samples or external proficiency testing samples; and

- **Assessment of** problem solving skills; and

Evaluating and documenting the performance of individuals responsible for moderate/ high complexity testing at least semiannually during the first year the individual tests patient specimens. Thereafter, evaluations must be performed at least annually unless test methodology or instrumentation changes, in which case, prior to reporting patient test results, the individual's performance must be reevaluated to included the use of the new test methodology or instrumentation.

- Develop SOPs and templates
- Develop the program and make adjustments over time
- Group or batch tests and competencies when possible
- To make competency more manageable:
  - If the test is performed on the same platform (test system), and has no unique features, or problems all of the tests on the platform can be combined.
    - i.e. hematology or chemistry analyzer
  - If there are unique aspects of a test on the platform, it must be assessed separately.
- Utilizing previous analyzer or QC troubleshooting information

- Break it down into quarters
  1. Direct observation of performance (checklists)
  2. Unknowns – previously analyzed samples
  3. Assessment of problem solving skills (quiz, case studies, or tests)
  4. Direct observation of instrument maintenance/function checks
- Review of worksheets, QC records, PT results, PM records **and** monitoring recording and reporting of test results can be documents as part of daily reviews
  - One can also follow a sample from processing to result verification

- New employee training should be consistent
    - Utilize the same employees to assist in training
    - Pair new employees with mentors when possible
    - Have a defined schedule to include expectations, outcomes, and end points
    - Ensure SOPs are followed, update errors in SOPs immediately
    - Assess all employees beginning knowledge to ensure all aspects of testing are covered (mixing, spinning, etc.) Never assume all employees are coming in with a basic understanding
    - Assess employee learning style
    - Utilize training aids when available (i.e. flowcharts)

- Visual – Prefer graphs, pictures, and diagrams. They look for visual presentations.

  – Incorporate both visual and verbal cues.

- Verbal – Prefer to hear or read information.

  – Incorporate both visual and verbal cues.

- Sensory – Prefer concrete, practical and procedural information. Just the facts.

  – Provide both hard facts and general concepts.

- Intuitive – Prefer conceptual, innovative, and theory. They look for the meaning.

  – Provide both hard facts and general concepts.

- Active Learners – Prefer to manipulate objects, do physical experiments and learn by trying. They also like to work in groups.
  - Allow both experiential learning and time for evaluation and analysis.

- Reflective Learners – Prefer to think through, to evaluate options, and learn by analysis.
  - Allow both experiential learning and time for evaluation and analysis.

- Sequential Learners – Prefer to have information presented linearly and in a orderly manner. They must put together the details to understand the big picture.

- Global Learners – Prefer holistic and systematic approach. They see the big picture first and then fill in the details.

Reference: Mind Tools. Learning styles

Training New employees

- **Knowledge**:
defines; describes; enumerates; identifies; labels; lists; matches; names; reads; records; reproduces; selects; states; views.

- **Comprehension**:
classifies; cites; converts; describes; discusses; estimates; explains; generalizes; gives examples; makes sense out of; paraphrases; restates (in own words); summarizes; traces; understands.

- **Application**:
acts; administers; articulates; assesses; charts; collects; computes; constructs; contributes; controls; determines; develops; discovers; establishes; extends; implements; includes; informs; instructs; operationalizes; participates; predicts; prepares; preserves; produces; projects; provides; relates; reports; shows; solves; teaches; transfers; uses; utilizes.

- **Analysis**:
correlates; diagrams; differentiates; discriminates; distinguishes; focuses; illustrates; infers; limits; outlines; points out; prioritizes; recognizes; separates; subdivides.

- **Synthesis**:
adapts; anticipates; categorizes; collaborates; combines; communicates; compares; compiles; composes; contrasts; creates; designs; devises; expresses; facilitates; formulates; generates; incorporates; individualizes; initiates; integrates; intervenes; models; modifies; negotiates; plans; progresses; rearranges; reconstructs; reinforces; reorganizes; revises; structures; substitutes; validates.

- **Evaluation**:
appraises; compares & contrasts; concludes; criticizes; critiques; decides; defends; interprets; judges; justifies; reframes; supports.

- A Training Plan is a guideline for the trainer and the trainee for department specific trainings. The trainee is responsible for completion of the events within the given time.

- The Technical Supervisor is responsible for regularly evaluating the trainee's progress during the initial training period, amending the training plan according to his/her discretion.

- See example Training Plan

- Flexible documents that can be designed to cover the specific training needs of an area

- Hyperlinks can be embedded for demonstrations

- See example "in-house training"

- Touch on the most important point of the SOP including areas that could be problematic

- Can have different formats (from more general to more specific)

- Need to be included in your annual review along with the SOP and any other training aids

- Learners read the procedure and/or view demo (refer to example SOP)

- Training Module or checklist is available to set the training pace and expectations

- Principle of skill, instrument, or method is reviewed

- Instructor performs the skill / operates the instrument

- Demo from the best vantage point

- Emphasize key points and re-iterate them by including related questions in the competency quiz

- Be patient and answer questions

- Prepare practice materials if possible or extra reading materials

- Observe for improper technique and correct the trainee by demonstrating again the proper technique

- Keep a table with a list of all the procedures related to a methodology

- Identify the critical parts of the procedure

- Whenever possible include visuals and examples in both the procedures and the training modules

- Use scripts for repetitive functions

- http://www.youtube.com/user/PCCvideos/videos?query=MLT
- http://library.med.utah.edu/WebPath/TUTORIAL/URINE/URINE.html
- http://pathinfo.wikia.com/wiki/Pathology_Links
- http://www.arupconsult.com/
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- Phillips, S. (2013). A Roadmap for Competency Assessment. Retrieved from http://www.greatplainslabmeeting.org/wp-content/uploads/2013/02/A-Roadmap-to-Competency-Testing-BW-Handouts.pdf