Incorporating the Renne Test
Into the Learning-Over-Time Model

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The changes in the educational preparation for certified athletic trainers have brought to the forefront a requirement for a competency-based learning environment. Although all students might have historically demonstrated competence with a particular task at one point or another within a curriculum, the concept of demonstrating such competence repeatedly forms the framework for what is known as learning over time or mastery over time (Amato, 2001). These two terms have been used interchangeably in various settings. One of the authors (HKA) has presented the notion that simply being able to perform a task repeatedly does not constitute effective mastery. Rather, effective implementation of the learning-over-time concept involves a number of components that work in unison to develop a critical pathway from the classroom environment of acquiring skills to the clinical environment of using such skills in the decision-making process. This process includes not only the psychomotor aspect of skill demonstration but also the cognitive and affective components associated with the implementation of each skill. In this article, we use the phrase learning over time rather than mastery over time to be consistent with current athletic training educational terminology.

Although learning over time should not be viewed as a “checklist” of events, there is typically a progressive method by which information is taught and applied throughout a curriculum. It is this formal and informal sequence of events that leads to the development of mastery of academic competencies and clinical proficiencies. In this article we provide an example of how the learning-over-time concept can be used with respect to a less commonly used special test, the Renne test for assessment of iliotibial-band friction syndrome (Renne, 1975).

Performing the Renne Test

The Renne test is performed by having the athlete support most of his or her body weight on the involved leg while slowly performing repetitive minisquats. Simultaneously, the examiner palpates over the lateral epicondyle of the femur on the involved leg (Figure 1).

It is believed that the iliotibial band lies directly over the lateral epicondyle when the knee is flexed to approximately 30°. As a result, applying pressure over this area while the athlete actively contracts the surrounding musculature can provoke the reproduction of pain or discomfort.

Key Points

- The Renne test is used to assess iliotibial-band injuries.
- The learning-over-time concept can be used to assess mastery of a clinical proficiency in athletic training.
- Incorporating athletic training domains into clinical education is essential to ensure mastery of clinical proficiencies.
- Key Words: mastery, clinical proficiency, clinical education, continuum.
Teaching the Renne Test Across the Curriculum

Teaching the Renne test starts long before the first exposure to the test itself. Before learning to perform this special test, students are exposed to the anatomy of the iliotibial band and the surrounding area. Also included in the early lectures are definitions and basic biomechanics of the kinetic chain.

After students have a basic understanding of the cognitive concepts, the introduction to the Renne test can then take place in the classroom early in the athletic training curriculum. This might occur in the form of a classroom lecture that is supplemented by assigned readings. The primary goals during this phase of education include defining the test, explaining and demonstrating how it is performed, and indicating the meaning of a positive versus a negative finding. This step is the first in the learning-over-time concept; therefore it is critical that the correct information be disseminated (see the sidebar).

After the didactic introduction of the Renne test, students should be supervised in a controlled laboratory setting while they perform the psychomotor skills associated with the test. These skills include positioning the subject, placing their hands appropriately, and implementing the test itself (see Table 1). While they practice this skill in a supervised environment, it is likely that students will not be performing the test on a subject with an actual iliotibial-band injury. Thus, a positive finding of pain would not occur, leaving students to assess their performance solely based on supervisor feedback.

The first formal opportunity to assess students’ acquisition of knowledge is typically through a written examination. A written examination includes

Steps for the Learning-Over-Time Concept

1. Lecture introduction of material
   - Anatomy
   - Biomechanics
   - Mechanism of injury
   - Evaluative techniques
2. Supplemental material
   - Relationship of evaluative technique to situation
   - Audiovisual performance of evaluative technique
3. Supervised laboratory practice
   - Faculty and clinical instructor supervision of student
   - Peer student supervision
4. Written examination: multiple-format questions in written form
5. Laboratory practical examination
   - Practical proficiency assessment of student administered by approved clinical instructor (ACI)
   - Immediate feedback to correct performance
6. ACI-supervised proficiency demonstration
   - ACI assesses student performance in clinical setting with model
   - ACI assesses student performance in clinical setting with existing documented athletic injury
7. Clinical-setting experiences: Student performs skills as opportunities present themselves during athletic competition.

Figure 1 The examiner palpates over the lateral epicondyle while the athlete performs a minisquat.