It's About Time: The Relationship Between Accuracy and Fluency

Claudia E. McDade, John M. Brown and L. Andrew Goggans

As fluency builds, errors decrease in frequency, while corrects increase in frequency. This simple generalization is seen time and again in the Center for Individualized Instruction at Jacksonville State University. For over 15 years, more than 18,000 students have worked in the CII with Precision approaches to develop their academic skills.

Center staff assist students in building their academic skills through the Computer-Based Precision Learning System. Templates within the system shape student performance in any skill or academic discipline. The AccuLearn Template teaches the basic associations between terms and definitions, concepts and principles, or summaries and their evaluations. Once the student answers a particular question, immediate feedback reinforces the accurate answer with an example or corrects the inaccuracy with a bit of text. Exact timing of student progress through the system omits the time students take to review the feedback.

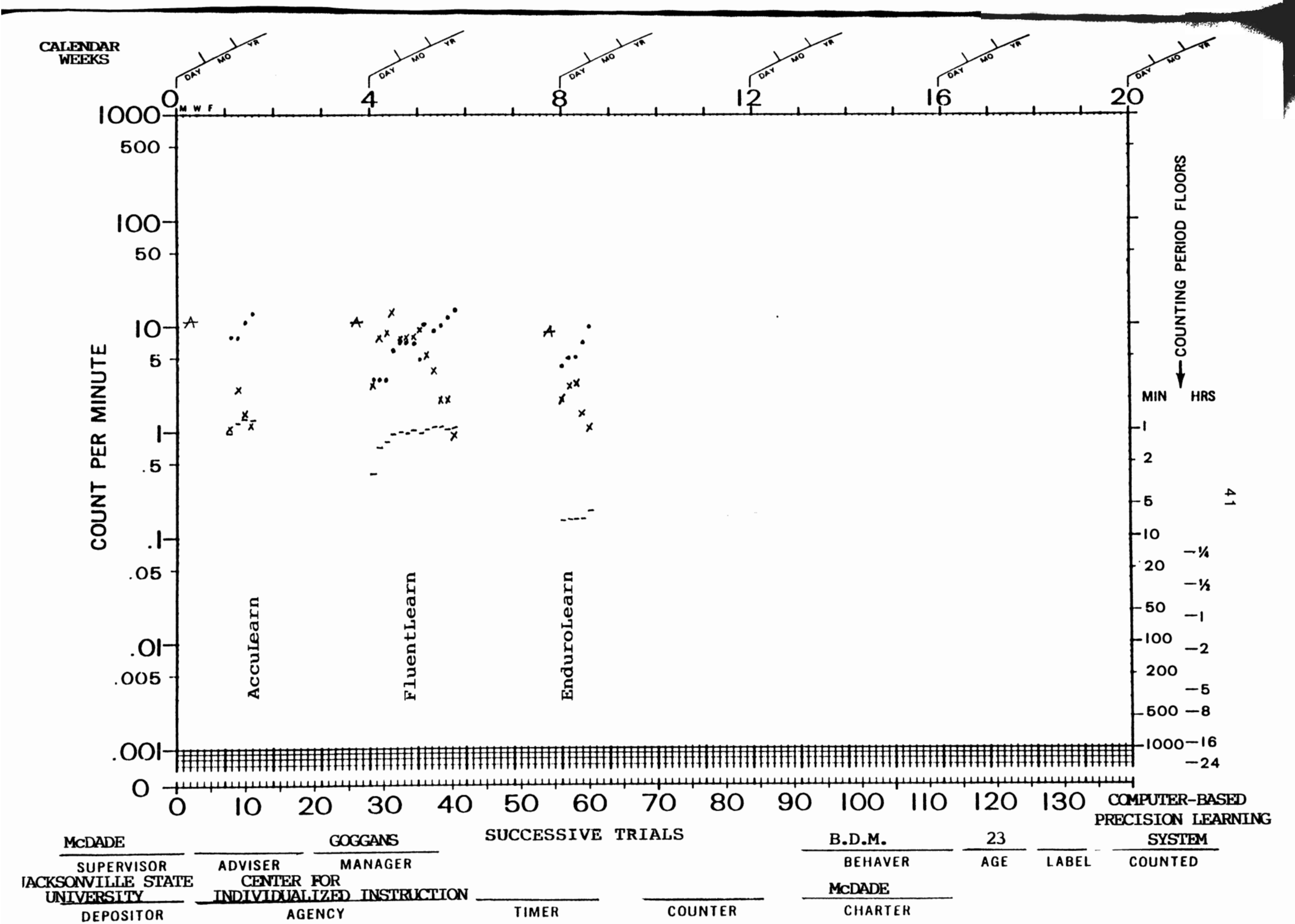
Once students have already formed accurate associations, they proceed to the FluentLearn Template which pushes them to reach high rates of accurate performance. Typically, 10 to 12 questions are drawn from a large item pool, with mastery defined as 12+ correct answers per minute. Students typically finish a single performance session on FluentLearn in less than a minute. Some vocabulary tasks include some words students already associate accurately but do not perform fluently. These are usually presented initially on FluentLearn because students make the appropriate associations very quickly without need for further instruction. Endurance or application exercises are used to verify their use of correct associations.

The EnduroLearn Template is used to develop endurance on the skill or task by asking the student to work through the system in 5, 6, 7, 8, 9, or 10 minute sessions. Students are more likely to see most of the questions in the item pool in EnduroLearn, even though mastery is still defined with fluencies of 12+/minute.

In all three templates, the relationship between fluency and accuracy is confirmed: As fluency increases, accuracy increases to 100% and error decreases to 0%. Typical student performance is seen on the accompanying Standard Celeration Chart.s

Demonstration disks of AccuLearn, FluentLearn, and EnduroLearn are available from McLAB, Inc., 206 Burke Avenue NW, Jacksonville, AL 36265.

Dr. Claudia E. McDade is Director of the Center for Individualized Instruction and a Professor of Psychology at Jacksonville State University. John M. Brown and L. Andrew Goggans anre Instructiors in the Center for Individualized Instruction at Jacksonville State University.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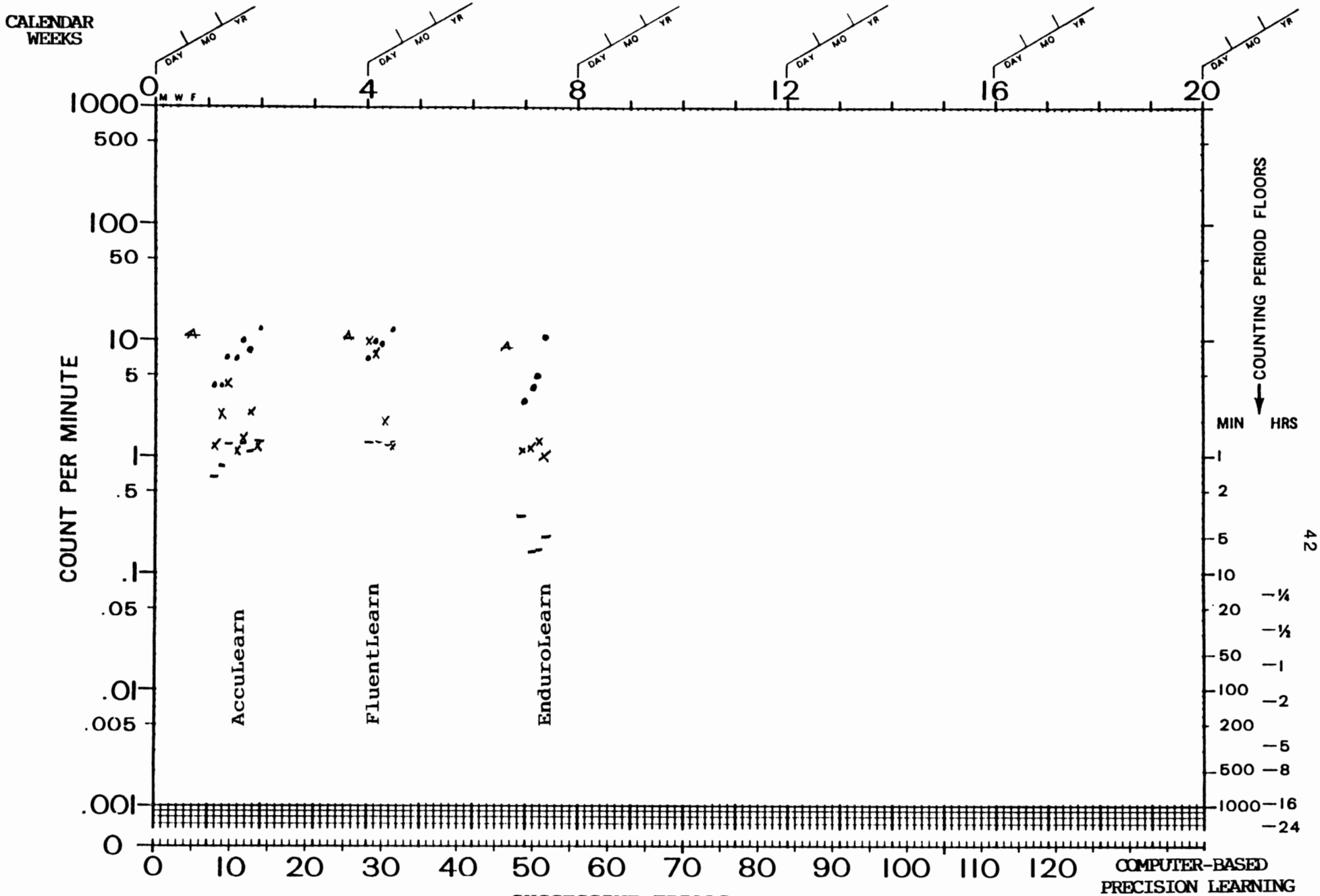

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