The effectiveness of this reward contingency was evaluated by observing the direction of change in three basic measures of behavior: (1) frequency (frequency multipliers or jump), (2) bounce (variability), and (3) celeration (celeration multiplier or turn). Chart 1 shows data for two students showing different effects. In moving from the baseline to the reward period, student #1 demonstrated a frequency multiplier (jump up), a decrease in bounce and a celeration divider (turn down). Student #2 experienced a frequency multiplier (jump up), a decrease in bounce and a celeration multiplier (turn up). Chart 1 also illustrates the summary data for all 7 students, showing the number and direction of changes in frequency, bounce and celeration.

These data indicate that "you get what you reinforce." The contingency was for any daily performance improvement. The summary data for frequency and bounce show that the contingency had the desired effect, frequency multipliers (jump ups) with less bounce. However, there was a celeration divider (turn down) on four of the seven charts.

Interpretation of these data leads to several conclusions: (1) to get significant celeration multipliers (turn ups), we may have to accept some bounce, (2) if we reinforce small, daily performance improvements, we may inadvertently limit celeration, and (3) if improved learning and lasting performance is desired, the daily performance change reinforced should be large enough to produce significant celeration multipliers (turn ups).

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TRENDS IN EDUCATION: A CELERATION ANALYSIS
Robert Bower
Lawrence, Kansas

METHOD

A graphic representation of trends can be obtained by plotting yearly data on the yearly Standard Behavior Chart. In this study the researcher counted the number of yearly references to topic headings in Education Index. It was assumed that Education Index provided a representative sample of educational publications, indicating the interests of the educational community. Yearly frequencies were placed on the Standard Behavior Chart. The "trend-following" celeration technique was employed in drawing and analyzing celeration lines. A Histolay was constructed to observe the relationships of 3 educational events and charted educational interests. These 3 events were the National Defense and Education Act of 1958, the Elementary and Secondary Education Act of 1965, and Public Law 94-142 (the special education mandate) of 1975 (NDEA, ESEA, and 94-142).
RESULTS

Reinforcement and Behavior Modification--After two decades of x4 acceleration, a celeration turn-down has resulted in a period of no growth for the last eight years.

Educational Laws and Legislation--Corresponding acceleration trends preceded the NDEA, ESEA, and PL 94-142. Deceleration trends followed NDEA and ESEA, however an acceleration trend follows PL 94-142. The steep deceleration trend following ESEA took the frequency to a level fitting the overall deceleration trend of a 40 year period, from 1935-1975.

Legal Actions and Defenses--A 12-year deceleration trend was reversed with the ESEA. The acceleration trend (x2), beginning in 1966, is confirmed with the reaction to PL 94-142. It looks like educators will be preoccupied with legal actions and defenses as we enter the next century. Although topographically related Legal Actions and Defenses and Educational Laws and Legislation are functionally independent. They counterbounce, countercelerate, cobounce, and cocelerate.

Accountability--An extremely rapid initial acceleration (x100) is followed by a deceleration trend. A newer topographical category, Competency Based Education, may have usurped some numbers in its acceleration trend.

Competency Based Education--Beginning acceleration is rapid with some leveling off in the mid-1970's. A new acceleration trend corresponds temporarily to PL 94-142 and confirms the overall acceleration trend.

Education Evaluation--A frequency multiplier (jump-up) occurred in 1966. However the shift was accompanied by only a slight change in celeration, as it remains relatively flat.

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PERFORMANCE AND LEARNING WORLD RECORDS

To emphasize performance aims/standards and to encourage learning above x2.0, Michael Maloney has suggested that we initiate this world records section. Two (2) performance records follow. They will stand as world records until someone "beats them." If you are aware of potential world records, especially learning records, send them to the editor.

Performance World Records

Tanya Kelb (Belleville, Ontario) See-think 1470 words per minute (silent reading)

Vicky Vachon (Belleville, Ontario) See-write 146 subtract facts of 18 per minute

Learning World Records
(yet to be submitted)
Chart 1. Reinforcement and Behavior Modification
RESULTS

Reinforcement and Behavior Modification--After two decades of \( x^4 \) acceleration, a deceleration turn-down has resulted in a period of no growth for the last eight years.

Educational Laws and Legislation--Corresponding acceleration trends preceded the NDEA, ESEA, and PL 94-142. Deceleration trends followed NDEA and ESEA, however an acceleration trend follows PL 94-142. The steep deceleration trend following ESEA took the frequency to a level fitting the overall deceleration trend of a 40 year period, from 1935-1975.

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Chart 2. Educational Laws and Legislation
Chart 3. Legal Actions and Defenses
Chart 4. Accountability
Chart 5. Competency Based Education