from the charted daily data. First, there was so much bounce that trends were not always apparent. Second, there were days when I made few visits. If I were concerned about keeping visits rather constant from day to day, daily recording would have been necessary. This also would have shown the influence of regularly scheduled meetings, such as administrative team meetings on Tuesdays. Neither of these were important concerns, however.

After about four months of this recording, I focused on one main objective. That was to get into each classroom regularly, such as twice each week. I made a weekly record sheet with each room listed, and a space to check for each day of the week. From this sheet I could get daily totals, room totals per week, and total visits per week. I then charted total visits per week. If I met my objective of two visits per room each week, my weekly chart would be fairly stable. Phase 2 of the chart shows the result of my room visit schedule through the end of last school year.

Once again I learned that merely monitoring behavior is often enough to change it. When I improved my recording procedure in January, my weekly counts immediately increased. Also, a trend became evident. March counts started low (I was in Orlando for the Winter Conference), and there was a dramataic decline in May and June, as end of the year planning began to take much of my time.

Phase 3 shows data from the first three weeks of the current school year. I knew that I was attending more meetings than the previous September. I also knew that other activities were taking more of my time. (We were planning a staff development program in precision teaching, and a small conference to be held in November.) The data were beginning to make me somewhat uncomfortable.

As you can see by the chart, I made a traditional, somewhat predictable, and totally irrational decision upon being confronted with irritating data. I stopped collecting it. Here I was, an espoused disciple of data, and it took me four weeks to admit that the real reason I quit charting was not because I was too busy to chart, but that I did not like what the chart was telling me.

I had been making visits during that time, but not as many as I wanted. When I again started counting and charting, it forced me to rearrange my schedule to insure that I got into each classroom often.

What is the message here, friends? Perhaps that it's easier to ignore when you don't count. (Remember, ignore is part of ignorance.) I am sure there are many administrators and managers that are more diligent self charters than I. I am also sure that by sharing data and data collection procedures, we may begin to make as much progress in our own fluency as our students have in theirs. If you have a chart, share it. If you don't have a chart, start!

Here are some Chart Starters. Remember, start small, with a pinpoint that seems to be of major concern at the time: Number of phone calls; number of students sent to office (are Fridays really worse?); number of times YOU initiate a greeting to students; number of library books checked out; amount of ditto paper or Xerox paper used, by grade, room, subject, etc.; enrollment counts and projections; hot lunch counts; bus riding counts; daily attendance and tardiness, perhaps by period, if that is of interest; number of student charts kept;number of pages of professional reading. These are merely beginnings, and some of them may be inane, but if we can begin by regularly counting some simple behaviors, it will be easier to move to more complex pinpoints.

Send us your suggestions, and charted examples. In time, we may be able to describe the "fluent administrator."

REHABILITATION

Carl Binder & Charles Merbitz

The September, 1982 issue of **Byte** magazine was devoted to computers for the disabled, and has some articles of interest to the Precision Teacher. In particular, Paul Schweyda and Gregg Vanderheiden present a firmware card for the Apple II that allows a disabled person who can control only one type of input device to run commercial programs that require all other types of input. A Precision Teacher might use this device to have the microcomputer count and time behavior while running commercial programs that weren't designed to count and time.

Another interesting article, by Bruce Baker, reports on the development of a speech synthesizer using a language called 'Minspeak,' in which the disabled person selects concepts to communicate, not words, characters, or phonemes like other alternative communication methods. For example, a picture of a turkey represents "bad" or "danger," depending on the context. A microcomputer selects the word to send to a speech synthesizer based on context. If a Precision Teacher would work with Minspeak, we could have Standard Celeration Charts of concepts communicated per minute, and since it is on a microprocessor, all of the individual's

daily communicative behavior could be timed and counted. We know that people have circadian rhythms—how about weekly, monthly or seasonal undulations in concepts communicated per minute? Perhaps at the next Winter Precision Teaching Conference in Orlando we can discuss some of these possibilities.

See you there!

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CONSIDERING STANDARDS

Eric C. Haughton

Performance standards! Who needs them?

Don't we have enough challenges in our day to day activities without introducing this nettlesome issue?

Exactly my own train of thought, or non-thought, about this topic unit, . . . At this point a montage of behavers floods my inner eye, as I see people expected to perform, but inexplicably, could not. Searching backward and forward in their behaving systems, we (co-workers and myself) often found a key prerequisite performance either absent or else profoundly deficient.

Such findings, of profound lacks or deficits, led us to analyzing what we knew about performance-based decision making. Ten years ago this was a radical question as curricula decisions (for example) were largely based on quality considerations and/or were peer-norm referenced in our traditional, commercial standardized tests. Since performance decisions in our programs require specific, precise and topical data on both quantity and quality, we obviously had precious few performance references for our decision making.

That we have few reference standards in the Behavioral Sciences places us in marked contrast to other major human service providers. Concerned professionals in medicine, architecture and construction, transportation, nutrition and electronics are concerned about various standards influencing the quality of our lives. Not that there isn't more work to be done, enforcement improved and many refinements desired in this crucial area. We now take for granted, however, 37° Celsius or 98.6° Fahrenheit, resting pulse in the 60 to 80 beats per minute range along with 10 to 15 respirations per minute as some of the indicators of adequate health. A lengthy listing of all the normal ranges of indicators signifying physical health is available. Those ranges are fairly well understood as are physical consequences resulting from being outside the range along with effective options for remediating debilitating deviations. On the other hand, suppose we require a such firm frame of reference in reading, writing or arithmetic? Until recently we have had no established performance standards against which we could compare our client's data. (Note: We require performance data not references that are related to such irrelevant factors as age or grade level.)

An early example of this dilemma occurred in my work about 1970 when, puzzled about some decisions required for grade one and two reading projects, I remember asking Clay and Ann Starlin what levels we could consider adequate in oral reading. Their best estimate was about 80 words correctly pronounced per minute. We needed a performance standard to guarantee children's successful progression in reading. Now, after many explorations based on performance and learning measurement, we know that preschoolers easily exceed 300 words per minute in the See text/Say words channel on practical and, practiced materials. These recent data underscore the retarding consequences of referring to age or grade averages when we need refined definitions of proficiency or fluency.

As many of you know, 80 words per minute exceeds 1982 grade one peer-norm referenced measurements by about x1.6. We, who are concerned about performance standards that insure proficiency, are required to learn what to expect **from our performers** and not from external data commercial sources. We learn about performance requirements from continuous assessment work with our cooperating behavers. Skilled people are like a carefully woven, beautifully symbolic tapestry—a wrap and woof of smoothly synthesized fluent performances.

The idea of relating to "standards" usually produces a mixture of interest, positive inferences, negative feelings, along with considerable trepidation. Quite a mixture! Such a mixture of inner reactions can combine to cause us to veer away from the issue. For good reasons too!

One of the most intriguing stories exemplifying the puzzle of our mixed feelings toward standardization relates to the habitual arrangement of our typewriter keyboard. My typing involves a QWERTY keyboard, established