

his old “grabbing” behavior. This is a common story. Learners with disabilities are often noted for their “forgetfulness.” However, what if the desired skill was still really there, lying dormant beneath the concealing blanket of an older, more fluent behavioral alternative? We might try to increase the fluency of the pointing responses so it could compete more effectively with grabbing. When you get right down to it, however, what could be quicker than simply grabbing what you want? So, what if we made the old behavior pattern *less* useful? What if we unleashed the power of the inhibiting manager force field on the grabbing response?

In the first few days of Paul’s program he never pointed to the food he wanted, he just grabbed, so Learner Knight Billingsley (1985) and Laura Dickenson (Paul’s teacher) decided to put a force field around the grabbing behavior during lunch time. No “instruction” was provided — Paul was never told or shown what he should do. After all, he had been taught all that a year ago. He was only prevented from actually getting the food he tried to grab by making him throw it away. After a few confused days (see Chart 6), the light of the good side of the Learner Force shone through and

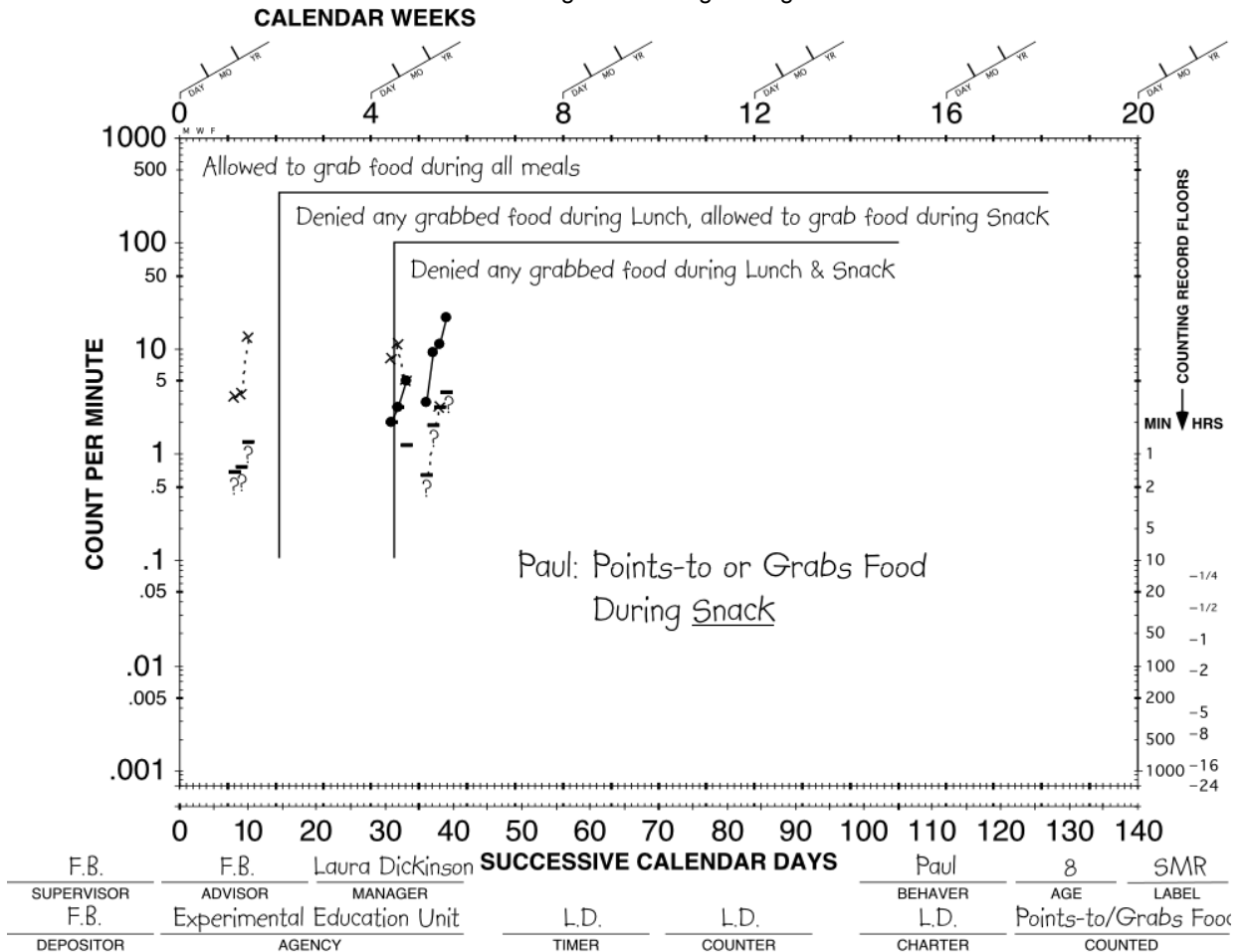
Paul began to point to the food he wanted with the same fluency he used to display in grabbing.

Snack time was another matter, but encouraged by success in one setting, the force field was turned against grabbing during snack time. The desired behavior appeared almost immediately, without specific instruction, just by preventing the pointing behavior from being effective.

With a minimum of effort, it would seem, the power of that Normie villain Decel-Vader that lurks in all managers *can* be turned from the Dark Side. The mask can be ripped away, revealing a caring Learner Knight and unveiling the true power of the Learner Force.

In the next episode, “Scouts, Flankers and Rear Guard,” Uncle Owen returns to the question of finding aims that will allow the Learner Rebels to advance quickly through the curriculum.

Chart 4: Paul’s Pointing & Grabbing During Snack Time



# Episode IV: Scouts, Flankers & Rear Guard

In previous episodes we followed Uncle Owen's diary as he tried to unravel the mystery of the Learner-Force concerning *terminal proficiency aims* — aims that will ensure a skill will be useful after instruction and artificial support are withdrawn. In this episode, Uncle Owen returns to the consideration of more elementary *intermediate proficiency aims* — aims that may not ensure the immediate usefulness of a skill outside instruction, but that *will* allow the Learner to move rapidly through a curriculum of related skills.

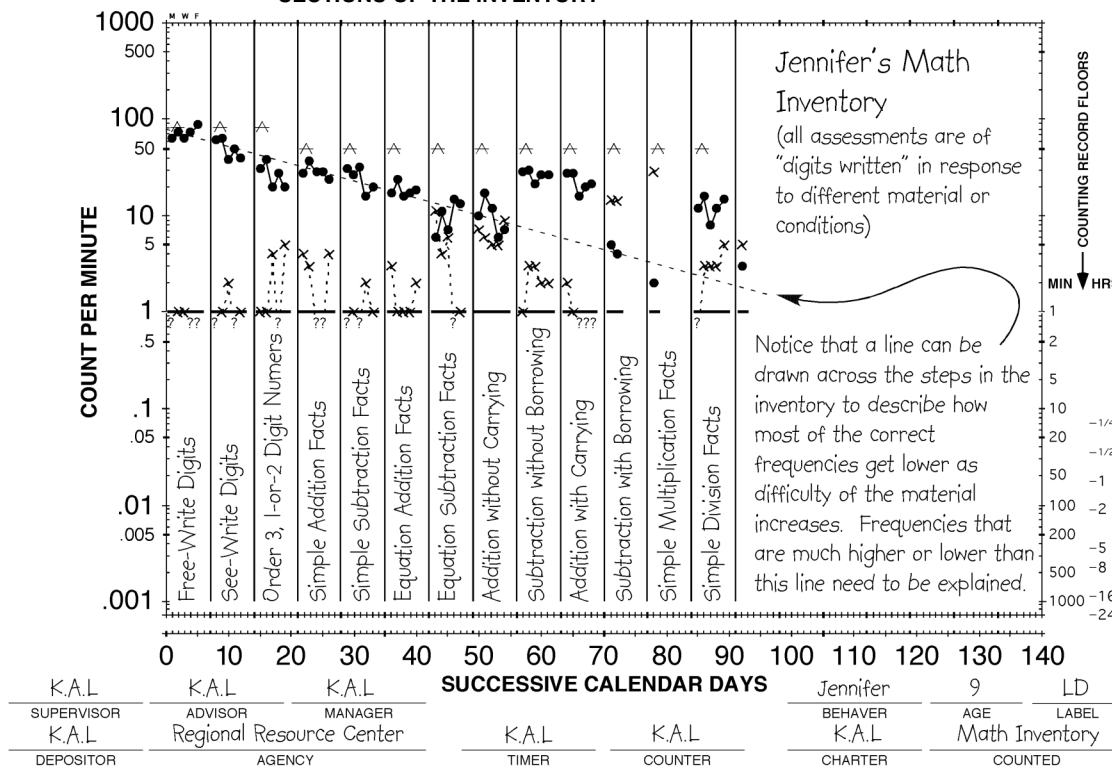
Advancement through a curriculum of related skills does not require complete mastery of each step along the way. Contrary to conventional wisdom, "leap aheads" to high levels in a curriculum has often proven quite successful in accelerating the progress of many learners (Bower and Orgel, 1981; Eaton and Wittman, 1983; Johnson and Jackson, 1980; Liberty, Haring et al., 1980; Lindsley, 1981; McGreevy, 1980). There seem to be many reasons for that success.

First, advancement to a higher level in the curriculum does not usually mean a complete abandonment of practice, assistance, and feedback for earlier skills. The learner will still encounter, still practice, and still receive feedback concerning most pre-primer words even when they are embedded within the context of a third grade reader. Addition and subtraction skills will still be practiced and supported when the learner receives instruction in long division. Given that continued support, it seems reasonable that the fluency standards for advancement through a cumulative curriculum might not have to be very high.

Secondly, higher levels in any given curriculum or task sequence generally represent larger, more functional units of behavior. "Picking up a shoelace" in isolation is not likely to be very useful for a learner, even if it will eventually prove useful as part of a shoe-tying task. Indeed, if the learner practiced such a small skill in isolation outside instruction, most people would think it was self-stimulation. "Stop that, you sill goose!" an observer might be expected to exclaim.

Advancing rapidly through the curriculum to a point where the learner is working on the entire shoe-tying task provides the learner with greater opportunities to accomplish something of meaning and value — something that has at least some chance of leading to accelerating consequences outside instruction. The value of working with

Chart 5: Jennifer's Math Inventory  
SECTIONS OF THE INVENTORY



curricular units large enough or advanced enough to gain access to natural accelerating consequences should not be underestimated (Stokes and Baer, 1977). At times that will mean finding a level in the curriculum that provides the learner with a skill of personal value (e.g., buying something at the store without a special manager around, rather than practicing “see/say prices” with flashcards). At other times the value in working with a particular skill will depend on the reactions evoked from other people in the learner’s environment. Jennifer’s inventory of math skills provides a good example (see Figure 7).

Jennifer, a third grade Learner-Rebel, was well below her classmates in all basic math skills. Five days were set aside to evaluate her frequencies in each of the 14 major skills she should have mastered by the end of the third grade. The inventory, one originally developed by Learner-Knight Liberty (1970), was carefully designed to reveal deficiencies in a learner’s demonstration of each skill and to highlight any unusual patterns in the relationships among skills. If a pupil is fluent, performances should be at or above typical Normie Aims (see the aim-stars **A** on the chart). Since all the behaviors being assessed use the same basic tool movement (writing digits), the “conceptual” difficulty of each task should be reflected solely by the frequency of correct movements demonstrated by the learner. As a task becomes more difficult, the learner’s correct performances will slow down. All skills in the sequence are actually tested on the same five days, so simple “passage of time” cannot account for performance increases or decreases across skill areas.

Jennifer’s performances confirm her lack of fluency in math. With the exception of the basic tool movement (free/write digits), correct frequencies are all below typical Normie Standards. Correct frequencies also fall off in a steady, predictable manner as task difficulty increases — *most* of the correct frequencies fall quite close to the solid, dark, decelerating line drawn across the chart. Correct frequencies for three skills are well above that line, however. Jennifer is doing much better than expected in two-column addition without carrying, two-column subtraction without borrowing, and simple multiplication facts.

A comparison of Jennifer’s two-column frequencies and her simple fact frequencies explains part of the mystery. Those frequencies are virtually identical. Jennifer is simply reacting to the two-column problems as if they were sets of two facts “scrunched tog ether.” However, Jennifer has never been provided with instruction in multiplication facts. How did she learn even a few of those facts?

It turns out that Jennifer’s regular classmates are now studying multiplication. Jennifer is not

even in the regular class during math period. She’s off in the resource room studying addition and subtraction, but she knows what the “regular kids” are doing. She wants to do it too. Somewhere, somehow, she’s been teaching herself multiplication. How *dare* she do this without the guidance of a teacher?

Fortunately, Jennifer’s teacher did not follow the tried and true method of “test up from the bottom until the child fails to meet aim and begin teaching there.” If she had, Jennifer would be studying “hear-to-write,” or possibly “ordering three-digit numbers” with a sprinkling of add facts. Jennifer’s teacher recognized her need to gain access to the natural accelerating consequences of learning what the others are learning, even if she’s “not ready.” So Jennifer got time to practice multiplication facts. She also worked on addition and subtraction, because she needed those skills too, at least in the long run.

This brings us to the last reason why leap-aheads without fluency on intermediate steps may work. Quite simply, what *we* might believe is “prerequisite” or the “natural order of things” may not be necessary or natural at all. Gary, a 14 year-old Learner-Rebel with severe mental retardation and physical disabilities, will scout the point and show us the way.

Gary needed to develop a wider range of “self-help” skills. One skill in particular would provide Gary with a bit more dignity and would be very helpful to his managers — moving from the toilet to a walker (and vice versa) without assistance. John Holliday, Gary’s manager, began as all good behavior analysts begin. He developed a detailed outline of the steps “required” to perform the desired task. He recognized the advisability of working with skills within a functional context, so he worked with all the steps in their proper sequence during each session, adjusting the levels of assistance he provided as necessary. The results are shown in Chart 8.

The first day was depressing. Gary failed to perform even a single step in the sequence correctly without full physical assistance. John had faith. The next day Gary performed two of the steps correctly. By the end of the ninth day Gary’s correct-steps-in-sequence were better than 20 per minute and errors were down to 10 per minute. Things were going so well, John reduced the level of assistance provided for each step.

Gary’s correct frequencies continued to accelerate, but at a much slower pace, and the errors were accelerating much faster. John knew he was supposed to turn to the “Traditionalist’s Normie Empire Handbook.” Things are not going well? You tried too move to fast. Slow down. Back up. Increase the level of assistance provided, at least for the more difficult steps.

“No,” cried John, aspiring Learner Knight that he was. “If Gary manages but *one* correct performance in five days I shall not retreat!” Instead, he studied Gary’s patterns of performance very carefully.

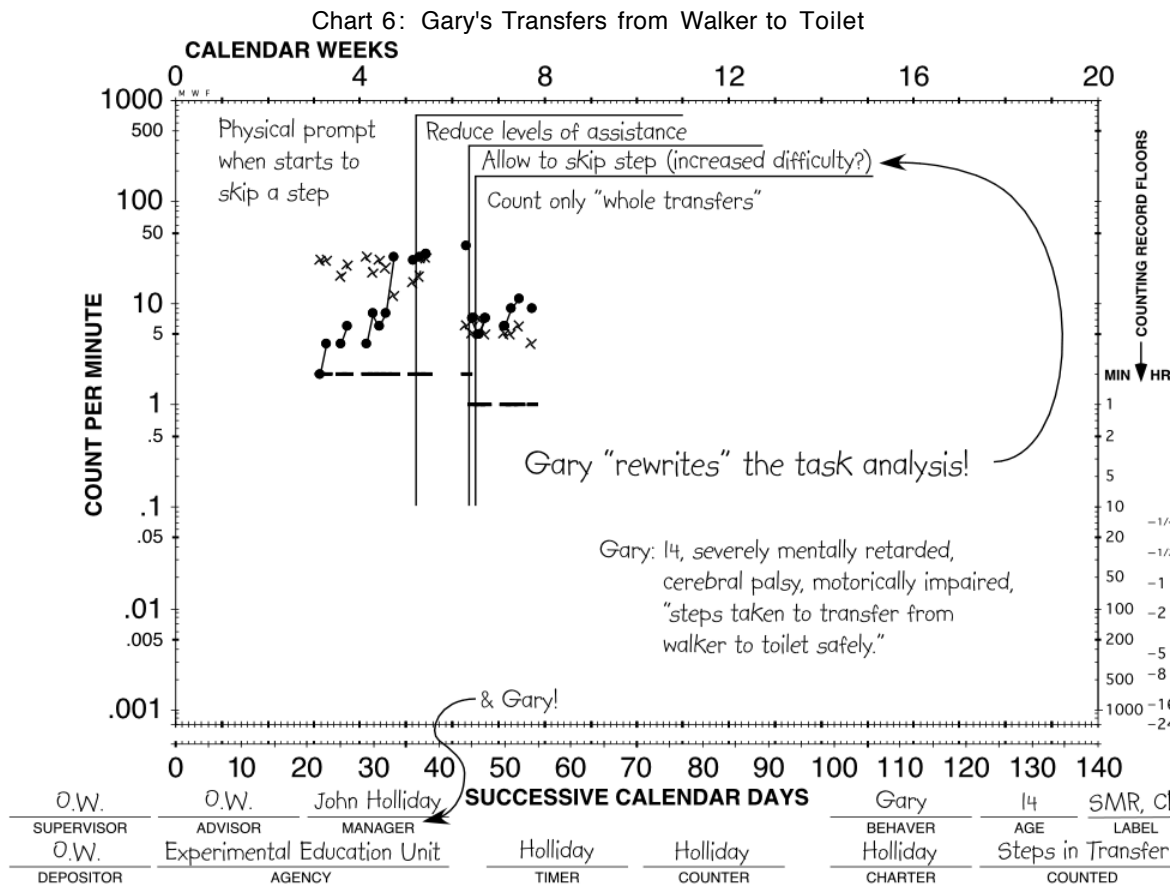
Gary wasn’t following the rules. John’s task analysis (developed with Gary’s special needs in mind) called for Gary to transfer each hand, one at a time, to the side of the walker closest to the railing, then (again, in two separate steps) transfer each hand to the wall railing. Most of Gary’s errors occurred when his hand seemed to “overshoot” the walker and begin to go directly to the railing. John had reacted to such tendencies as any good teacher would. He grabbed Gary’s hand before it got very far, plunked it down on the walker where it belonged, and recorded an error.

John cared more for Gary than the task analysis. If Gary wanted to perform the task in one step instead of two, that was all right. He began to allow Gary to skip any step he wanted. The next day the correct frequency edged up a bit and the error frequency plummeted. Seeing the futility of counting steps in a sequence that Gary apparently did not need, John began to count only “whole transfers” and provide assistance only when Gary really got off track. Things were confused for a few days, but moved along rather nicely after that.

What *we* believe to be a logical, perhaps necessary sequence of tasks may not be logical or necessary at all. Addition and subtraction do not have to be mastered before multiplication. Two stops for each hand is not necessarily easier for a child with physical disabilities than one stop for both hands. Send out the scouts! Take the point!

Work at the very highest level of the curriculum possible. If a child can progress on a mixed sheet of math problems containing all types of problems, then it really doesn’t matter whether addition comes before multiplication — it can all come at once. If a child can work out his or her own task analysis and achieve the desired end (like Gary getting to the toilet), then it really doesn’t matter whether it is the way *we* would choose to do it. If a fifth grader with learning disabilities can make progress by reading from a fifth grade book, even though the tests say a second grade reader would be “better,” then let the little learner-rebel go!

Is there such a thing as a leap too big? An “all mixed” math probe might confuse a child, or one type of problem might be consistently skipped and, therefore, never practiced. A learner with severe disabilities may need as least *some* guidance in figuring out a reasonable task sequence. A fourth grader child might still need drill in some particularly difficult blends in order to make the



best progress possible in the fourth grade reader. Perhaps, but we don't want to slow the learner's progress, either.

If it does seem more reasonable to work on certain sub-skills in a definite sequence, there are at least two ways we might still avoid a lock step, "do it my way, one step at a time" catastrophe.

First, although we might be working at an intermediate level of the curriculum, we can still "scout ahead." Work on blends, assess on blends, then assess again using the fifth grade reader, every day. When the ALPs (Advanced Learning-Probes) indicate that blending errors are dropping out of fifth grade reading, stop working on blends in isolation. Feedback for the few remaining errors can continue in the context of the fifth grade reader. Progress on the "leap up" ALPs assessments is the most appropriate and functional aim for intermediate skill instructional programs.

Second, if it simply seems unmanageable to probe all skills in a sequence at the same time (i.e., the ALPs are too big), then at least move through cumulatively dependent sub-steps in the sequence as quickly as possible. Get to the highest level possible as quickly as possible, and then begin to build "terminal" fluency.

This strategy makes sense. However, with almost everything, there are a few caveats. An all out "charge up the curriculum" can leave one's flanks and rear exposed. Not all skills are strictly hierarchical, so there is sometimes a danger of leaving something behind that won't be incorporated into what appear to be related, higher-level skills. Judy's inventory demonstrates the wisdom of sending out flankers and a rear guard to avoid that problem (see Chart 9).

Judy is reading reasonably well in her grade level text. She's just a bit below aim, though, so just to be safe, send out the flankers and check the perimeters.

We've found a weak spot. Her blending skills are almost non-existent. Judy's teacher has to decide whether it's wise to try and turn a reasonably fluent sight-word reader into a phonics reader. That would require a controlled withdrawal to a lower frequency in order to regroup, but it might make all the difference when the final assault on functionality begins. A tough decision. If Judy's teacher had not sent out flankers to check all perimeters, however, the possibility that a controlled withdrawal might be advisable would never have been discovered.

"Commander, Commander, there's another report from the flankers." Judy's math skill defenses are even weaker. She's certainly a long way from fluency in addition and subtraction, but she's not exactly out of the ballpark either. Now take a look at the flanker's report concerning her skill in writing numbers-in-order. "Judy, here are three numbers — 9, 13, and 2. I want you to write

the smallest number first, then the next number, and then the largest number." Judy can add, but our assessment results show that Judy does not know that 9 is bigger than 2. If we had charged blindly on and assessed only mixed addition facts, we might never have found out that Judy had memorized the answers to a few basic facts, but had no idea what the answer meant.

It's time to regroup! Don't withdraw, but reinforce the weak flank! Continue the drive on Judy's higher math skills, but begin additional work on her more rudimentary number concepts, then leap ahead again!

Work at the highest possible level of the curriculum. Move from one step in a sequence to another as soon as possible, but keep looking back (rear guard) and around (flankers) at related skills. Unless it is very obvious that all relevant skills are completely contained and adequately assessed in higher-level material, make sure those other skills get the attention they deserve. If necessary, work with high and low skills at the same time.

The second caveat concerning leap-aheads comes from a notion shared by Young Eric (Haughton, 1980). It may be advisable to have the learner practice high frequencies — get used to the "feel" of fluency, as it were. If constant leap-ups produce rapid movement through the curriculum and high rates of progress, but low frequencies, we may be teaching our pupils that it's o.k. to be **SLOW (Slothful, Lethargic, and Obviously Worthless)**. We must remember that there are several forms of "competition," and that **FAST (Fluency At Skill-instruction Termination)** will ultimately determine whether the skill will prove useful to the Learner. The battle is joined.

The simplest way to reach the end of a curriculum is to begin at the end. Teach the final, ultimate performance from the start. If that does not seem possible, then at least send out the scouts. Provide instruction for whatever intermediate steps seem appropriate, but keep trying to gain the vantage of the ALPs (Advanced-Learning-Probes) to assess the impact of your instruction on higher-level skills.

Leap ahead in the curriculum as quickly as possible, even if the fluency achieved at intermediate steps is less than what you know will be necessary in the long run. As you leap ahead, however, protect your flanks and establish a rear guard to make sure that all related skills are brought to a level that will make them useful after instruction is terminated. Blind faith that skills are truly "hierarchical" or "prerequisite" to one another in sequence is rarely justified. Look around, behind, and ahead.

In the next episode, Uncle Owen's diary draws to a close as he attempts to summarize his thoughts and describe the "Uneasy Truce" which appears to have been established between the Learner Rebels and the Evil Normie Empire.

---

# Episode V: Uneasy Truce

---

In previous episodes we met a host of Learner Rebels and Learner Knights as they struggled to overthrow the bonds of the Evil Normie Empire. Now we turn to the final pages of Uncle Owen's chronicle as he reviews what has been revealed to him. It seems that our dreams of defeating forever the Evil Normie Empire must wait for another age. For the moment, it seems that we must content ourselves with certain gains and an uneasy truce.

Eventually, instruction in the formal sense must stop. Artificial support for skill development will no longer be available. That does not mean that *learning* must stop, but the learner must be able to function independently, or the skill will simply cease to exist in any meaningful sense of the word.

I have already explored the notion of using traditional peer standards as performance aims and found them wanting (see Episode I, *The Deathstar*). While it is true that achieving normal levels of performance may facilitate acceptance into peer groups and provide useful skills for at least some post-school environments, it seems more often the case that other forms of competition will determine the immediate and eventual usefulness of the skills we teach.

In some cases, the skills that we would have our Learner Rebels master are in direct competition with other skills already in the Learner's behavioral repertoire (see Episode II, *Return of the Learner*). If we are to prevent the Learner from slipping back into old habits once instruction is terminated, we must make it much easier for the learner to use the new skill than the old. That can often be accomplished by setting the fluency aims for the new skill at a level  $\times 1.5$  to  $\times 2.0$  (one-and-one-half to two-times) higher than the fluency with which the learner is able to use the old, less desirable skill.

"Managers" in the Learner's world might also present a form of competition (see Episode III, *The Normie Empire Strikes Back*). If the learner lacks fluency, managers might simply become impatient and complete the task themselves or otherwise prevent the Learner from attempting the skill. Generally, managers can only be expected to allow a learner to perform a skill if it is Age appropriate or expected, takes Little of the manager's time, Lessens the manager's workload, does not compete with Other demands on the manager's time, or is for some reason of special Worth to the manager. If demonstration of the skill depends in some way on manager cooperation, then performance standards for the new skill must take managerial patience and demands into consideration.

If a skill has been brought to a level where it competes effectively with any necessary peer standards, other behaviors in the learner's repertoire, and managerial patience and demands, then one might reasonably expect the skill to be used if and when it is appropriate to do so. However, the anticipated frequency of use should also be considered when establishing fluency standards.

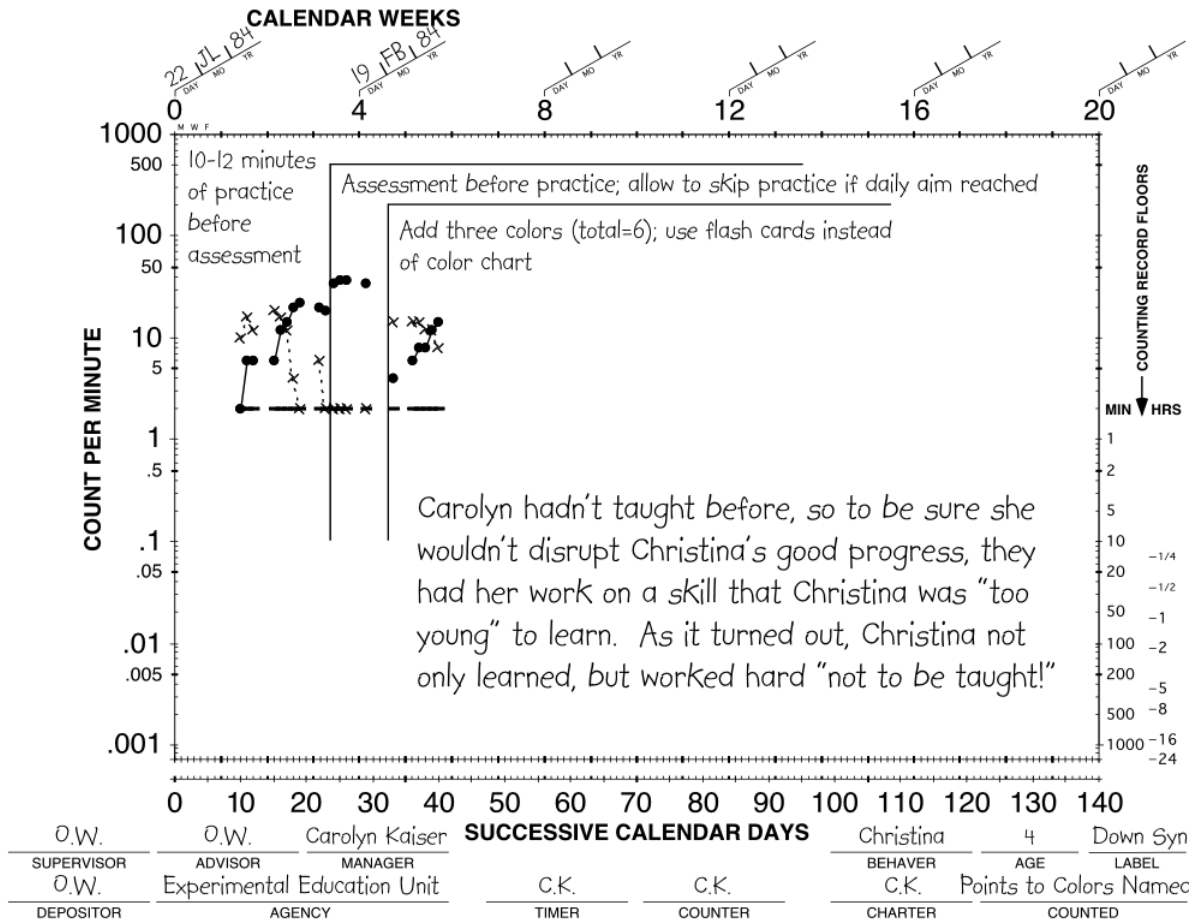
If the skill is not likely to be used often, high fluency aims should be established before formal instruction is terminated (see Episode I, *The Deathstar*). If the skill will be used often, then relatively low aims may suffice. Even if those aims represent a fluency lower than one would eventually like to achieve with the skill, frequent use is likely to provide the practice necessary to build that additional fluency.

This is really the difference between *retention* and *maintenance*. If a skill is unlikely to be used very often, even if it is potentially very important, we need a sort of "performance reserve" to keep the skill alive over periods of disuse. If the skill will be immediately useful to the learner, and used often, much lower levels of performance skill might be sufficient to maintain and continue the development of the skill.

"Spelling" is a common example of a retention problem. Knowing how to choose and spell "just the right word" can be very important in written communication, but many of those "right words" are only rarely appropriate. How often is it necessary to know that "sophisticated" means "impure or corrupt" or "pertaining to false logic," let alone how to spell it? Not often, but when it is, it's nice to remember. Initial attempts to learn the definition of the word and to spell it correctly can be artificially supported through verbal encouragement and formal spelling assessments. Once the spelling test is past, however, we can't count on naturally occurring opportunities to maintain and continue to improve the skill. It's important, therefore, to bring that skill to a high level of proficiency before we consider the learner to have demonstrated a potentially useful skill. Fortunately, there's ample evidence that establishing high fluency aims for such skills can effectively enhance maintenance far beyond what we might expect from accuracy-only aims (c.f., Berquam, 1981b; Binder, 1981). If we can bring a learner to a point where she can demonstrate the skill quickly and easily, not just accurately, there's a much better chance that the skill will still be there when she needs it.

Keeping a skill alive is a matter of maintenance if the skill is used regularly. Of course, that means that it must be at least minimally functional or useful under whatever conditions prevail at the time. Regular use, however, will ensure that the skill will remain in the learner's behavioral repertoire and, usually,

Chart 7: Christina's Color Identification



continue improve in effectiveness and/or efficiency without continued formal instruction.

“Walking” is a good example. When a child first begins to walk he is not very efficient. He falls a lot and has difficulty traversing long distances. There is usually ample reinforcement for initial attempts to walk, however, including a new perspective on life (he can see new and interesting things) and the willing encouragement of parents and others. We can usually withdraw artificial supports for walking (e.g., holding his hand) pretty early in the development of the skill, and still expect him to maintain and improve his skill. High “terminal proficiency” is not usually a requirement for stopping formal instruction with such skills.

Can a learner really continue to develop fluency without our guidance? Given a chance and a reason, Christina did just that (see Chart 9).

Carolyn Kaiser wanted to practice her Precision Teaching and was offered the chance to work with Christina, a cute, cooperative four year old Down Syndrome Learner-Rebel. Christina’s teachers were already having good success with all of her IEP objectives and did not particularly want to take a risk that Carolyn might mess things up. On the other hand, they didn’t want to take

Christina’s valuable time to work on some totally irrelevant skill, so they compromised by selecting a skill that should have been a good year in advance of Christina’s “developmental age” — naming three basic colors. If Christina made progress, fine. If not, well, that was to be expected. Carolyn liked challenges, so as long as Christina didn’t get frustrated, everything would be fine.

Following 10-12 minutes of instruction on the first day, Christina was assessed for 30 seconds and failed to name a single color-circle correctly. Oh well, it was a year early to develop that skill. Carolyn still liked challenges. She hoped Christina felt the same way.

The next day, following 10-12 minutes of instruction, Christina achieved a correct frequency of 6 per minute over a 30 second timing, but error frequency was higher.

After seven days and a “jaws-crossover,”<sup>8</sup> Christina seemed to peak out at 20 corrects per

<sup>8</sup> Ogen Lindsley and Henri Sokolove tried having young learners describe their instructional progress by giving names to the pattern of their correct and error performances over time. “Jaws crossover” was the name they gave to a learning picture in which correct frequencies

minute with 4 or 5 errors per minute — the edge of the fluency-building phase of learning, according to some rules (White and Haring, 1982)<sup>9</sup>. This is a good performance, but still too slow to be sure that Christina will remember the names very long, especially considering the anticipated frequency of skill use. This is too soon to let Christina go her own way. The “rules” would suggest a change in consequences to make continued practice worthwhile.

Learner-Rebels don’t always read the professional literature. They might not know about the rules.

Carolyn decided to chance it. She would place faith in the Learner-Force and let Christina go. For a little insurance, however, she also arranged things to make continued (independent) practice worthwhile. She moved the assessment to the *beginning* of the session (it used to be at the end, after 10-12 minutes of instruction) and told Christina that if she practiced on her own and met her daily aim, there wouldn’t be any instruction. The eventual aim was 40 per minute — x2 Christina’s best performance to date — but all Carolyn had in mind was steady progress up the chart. If Christina could just make progress each day, she’d buy her way out of instruction. Perhaps Christina didn’t understand. Perhaps she thought

---

started out higher than errors, but quickly crossed over to corrects-above-errors. The picture reminded the children of a shark’s jaws. Other pictures included “take off” (slow progress in corrects at first, followed by rapid gains) and “dive” (high frequencies suddenly falling off to low frequencies). Having learners name their performance patterns added interest and encouraged them to evaluate not just how well they were performing, but how quickly they were improving.

<sup>9</sup> There appear to be different “phases of learning” in the development of a skill, including acquisition, fluency-building, application, and adaptation. Each phase of learning seems to benefit from slightly different types of support. In acquisition, for example, continued learning is most dependent upon more “information” — cues, prompts, directions, corrective feedback — while in fluency-building, continued practice and a “reason to keep going” seems most important. Discussions of phases of learning and their implications for instruction are beyond the scope of this manuscript, but can be found elsewhere White, O. R. and Haring, N. G. (1980). *Exceptional Teaching* (2nd Edition). Columbus, OH: Charles E. Merrill; White, O. R. and Haring, N. G. (1982). *Data Based Program Change Decisions*. In M. Stevens-Dominguez and K. Sremel-Campbell (Eds.). *Ongoing data collection for measuring child progress*. Seattle, WA: Western States Technical Assistance Resource (WESTAR).

she had to reach all the way to 40 per minute in order to avoid instruction. In any event, on the first day following the change in plan Christina reached 38 per minute with no errors. The same performance was recorded on the second day. On the third day she reached her final aim without instruction. Carolyn responded appropriately by moving quickly on to the next level in the curriculum (more colors), a level supposedly a year and a half above Christina’s “developmental age.”

Can kids learn on their own?

They can, if they have a reason.

The best reasons are provided by working with a skill that will be immediately useful to the learner in daily life. Even if you find it necessary to work with somewhat more “abstract” skills, learners can still learn on their own if the consequences for doing so are meaningful. For Christina, those consequences were the repeated opportunities to buy her way out of 10-12 minutes of instruction.

One should never place blind faith in learner progress, however. Scouts should be employed to assess the use of a skill outside instruction. Flankers should be deployed to assess the development of important related skills not being directly taught. Rear Guard assessments should be conducted to make sure skills for which direct instruction has been terminated are being maintained and, if necessary, are continuing to develop in fluency (see Episode IV: *Scouts, Flankers and Rear Guard*).

If you have reached your performance aim for CYC words in isolation, but climb the ALPs (Advanced-Learning-Probes) only to find the learner is still making mistakes with CVC words within the context of the grade-level reader, then the learner is still not using the skill you tried to teach. Raise your aims. Provide the learner with the fluency which will make the skill easier to use and more functional.

Don’t just discontinue instruction in dressing skills when the learner meets the standards you agreed upon with the parents. Call the parents. Is the learner dressing himself in the home? If not, raise the standards to compete more effectively with whatever is holding the learner back, or at least encourage parents to allow their son to try on his own.

If the learner should use the skill every day, fine out if it *is* being used when the learner is not specifically directed to do so. Does the reader *choose* to read when there are other things she might do? During free time, how often does the learner read instead of playing pool? At home, does the learner ask what’s on TV or simply read the TV guide? Does the learner buy or subscribe to any magazine that isn’t all pictures? Does the learner *read*? If not, it may simply be a matter of “taste”(playing video games can be nice too), but it

may also be a matter of dysfluency. Try raising the aims.

Once a learner reaches aim in “takes bite with a spoon,” what happens when you walk away? If fingers come into play with food more appropriately eaten with a spoon, then the aim for spoon-use was too low.

Take away the constraints. Don’t tell the learner what to do. If the behavior you tried to teach is still used, then the performance aim was adequate to provide a service for the learner, at least for the time being. You will have at least reached that level of “independent practice” which Young Eric described (Haughton, 1980), and you might serve the learner’s needs better by moving on to another skill.

Indeed, one might be well advised to conduct USE(Undirected Skill Employment) probes throughout a program. Set a few seconds aside each day to see whether the learner chooses to use a skill even when not specifically directed to do so. When unprompted use of the skill is demonstrated, perhaps it is time to move on to teach another skill. Success on USE probes can become the ultimate aim, with specific frequency aims just temporary guide posts to see us on our way. Of course, a few rear guard and flanker probes from time to time might also be wise, just to make sure.

What’s the bottom lime?

Place faith in the Learner Force whenever possible.

However, don’t abdicate all responsibility for setting at least minimal performance standards which will allow the learner to:

be **A**ge appropriate,  
taske, **L**ittle of the manager’s time,  
**L**essen the manager’s workload,  
not compete with **O**ther demands on the manager,  
or be of special **W**orth to the manager.

Generally, for performance standards to become AIMS, they must provide. .

**C**ompetition with  
**O**ther skills in the learner’s own  
behavioral repertoire,  
**M**anager expectations and patience,  
and, when appropriate,  
**P**eer performances. Generally, to  
enable the learner to be  
**E**ffective in achieving those ends, we  
should  
**T**arget the highest level of  
**E**fficiency possible.

In other words, our **AIMS** must **COMPETE**.  
Aim *high!*

In addition, whenever possible allow the learner to provide for his or her own practice and to develop necessary additional fluency independently. Keep up the rear guard, flanking and USE probes, though, just to make sure it really happens.

Am I getting closer, Eric? Will I ever truly understand the mysteries of the Learner-Force?

## Postscript

Through this tongue-in-cheek adventure I have attempted to share some of my own opinions concerning performance standards. Over the years my opinions have become increasingly similar to those who have preceded me in the quest for the ever elusive Learner-Force, including of course, Eric Haughton (Young Eric, Learner Knight, the man in search of the seventh cycle) and Ogden Lindsley (Ogi-Wan Sixcycle, the original Learner Knight). To them and so many others I owe a great debt. Perhaps someday I will finally catch up. Still, I might have misrepresented some of their opinions in this series, due in part to my own misunderstandings and the sad lack of “hard data” concerning the issue of performance aims.

I suppose, if I have an overriding opinion on the matter, it would be simply that there are no sure answers, no truly functional aims set in stone, unchanging for time immemorial. Rather, I believe that the frequencies that will make performance aims functional will rise and fall with the tide of curriculum development, the changing demands of the world in which all Learner Rebels must live, and our own talents and priorities as teacher/managers. We must continue forever the evaluation and evolution of our standards.

Most importantly, though, I firmly believe that what will prove functional for one learner might prove dysfunctional for another. We could simply set aims so high that they would ensure functional fluency for virtually any learner, but that might prove counter-productive to rapid movement through curricula. I believe that we must look to the learner’s own behavioral repertoire, manager patience and expectations, and at least occasionally, the learner’s peer group for guidance. We must document the functionality of an individual’s aims by probing outside the instructional situation and after instruction has been terminated to determine if the skill is actually being used.

*May the Learner Force be with us all.*

## References

Berquam, E. M. (1981a) *The relationship between frequency of response and retention on a paired*

- associate task. Unpublished doctoral dissertation, University of Florida. Gainesville, FL.
- Berquam, E. M. (1981b). STRAT analysis: using stratified celeration stacks to summarize charted data. *Journal of Precision Teaching*, *2*(1): 13-17.
- Billingsley, F. F. (1985). *The effects of competing behaviors on skill generalization*, Washington Research Organization, University of Washington. Seattle, WA.
- Binder, C. (1981). *Treatment effects of timings: frequency and endurance*. A panel presentation, K. R. Johnson (chair). Seventh Annual Meeting of the Association for Behavior Analysis, Milwaukee, WI.
- Bower, B. and Orgel, R. (1981). To err is divine. *Journal of Precision Teaching*, *2*(1): 3-12.
- Clement, R. (1978). *Spring-Fall retention scores on precise monthly assessments*. Unpublished manuscript, Great Falls Public Schools. Great Falls, MT.
- Eaton, M. (1982). *Data-Based Decision Rules*. Presentation. Second Annual Meeting of the Precision Teaching Winter Conference. March 1982, Orlando, FL.
- Eaton, M. D. and Hansen, C. L. (1978). Classroom organization and management. In N. G. Haring, T. C. Lovitt, M. D. Eaton, and C. L. Hansen (Eds.). *The fourth R: research in the classroom*. Columbus, OH: Charles E. Merrill.
- Eaton, M. D. and Wittman, V. (1983). Leap-ups: acceleration of learning through increasing material difficulty. *Journal of Precision Teaching*, *3*: 29-33.
- Evans, S. S., Mercer, C. D., and Evans, W. H. (1983). The relationship of frequency to subsequent skill acquisition. *Journal of Precision Teaching*, *4*(28-34).
- Haughton, E. C. (1972). Aims, growing, and sharing. In J. Jordan and L. Robbins (Eds.). *Let's try doing something else kind of thing*. Reston, VA: Council of Exceptional Children.
- Haughton, E. C. (1977). *Tool skills and standard performance aims*. Big Sky Precision Teaching Conference. July 1977, Kallispell, MT.
- Haughton, E. C. (1980). Practicing practices: learning by activity. *Journal of Precision Teaching*, *1*(3): 3-20.
- Haughton, E. C. (1982). Considering Standards (a column). *Journal of Precision Teaching*, *3*: 75-77.
- Horton, S. (1985). *The use of calculators as a prosthetic device with educable mentally retarded students*. Unpublished doctoral dissertation. Education, Special Education, University of Washington. Seattle, WA.
- Johnson, J. and Jackson, J. (1980). Stepping ahead results in improved learning. *Journal of Precision Teaching*, *1*(1): 29-30.
- Johnston, J. M. and Pennypacker, H. (1980). *Strategies and Tactics of Human Behavioral Research*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Liberty, K. A. (1970). *Regional Resource Center Diagnostic Inventories*. Project Report, Regional Resource Center for Handicapped Children, Project No. 472917, Department of Special Education, Clinical Services. Eugene, OR.
- Liberty, K. A., Haring, N. G., and White, O. (1980). Rules for data-based strategy decisions in instructional programs: Current research and instructional implications. In W. Sailor, B. Willcox, and L. Brown (Eds.). *Methods of instruction for severely handicapped students*. Baltimore, MD: Paul H. Brookes.
- Lindsley, O. R. (1971). From Skinner to Precision Teaching: The child knows best. In J. B. Jordan and L. S. Robins (Eds.). *Let's try doing something else kind of thing: Behavior principles and the exceptional child*. Reston, VA: The Council for Exceptional Children.
- Lindsley, O. R. (1977). *Speed, accuracy, endurance*. Paper at a symposium, S. G. (chair), Chart releases from traditional measurement traps. Midwestern Association of Behavior Analysis, Chicago, IL.
- Lindsley, O. R. (1981). *Current issues facing standard celeration charting*. Invited address. Precision Teaching Winter Conference. February 1981, Orlando, FL.
- McGreevy, P. (1980). Hard to do becomes easy to learn. *Journal of Precision Teaching*, *1*(1): 27-29.
- Mercer, C. D., Mercer, A., and Evans, S. S. (1982). The use of frequency in establishing instructional aims. *Journal of Precision Teaching*, *3*: 57-63.
- Rae-Johnson Personal Communication.
- Stokes, T. F. and Baer, D. M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis*, *10*(349-368).
- White, O. R. (1980). Adaptive performance objectives: Form vs. function. In W. Sailor, B. Willcox, and L. Brown (Eds.). *Methods of instruction for severely handicapped students*. Baltimore, MD: Paul H. Brookes.
- White, O. R. (1985a). Aim\*Star Wars (Setting Aims that Compete): Episode 1. *Journal of Precision Teaching*, *5*: 55-63.
- White, O. R. (1985b). Aim\*Star Wars (Setting Aims that Compete): Episode IV. *Journal of Precision Teaching*, *6*(7-13).
- White, O. R. (1985c). Aim\*Star Wars (Setting Aims that Compete): Episode V. *Journal of Precision Teaching*, *6*: 30-34.
- White, O. R. (1985d). Aim\*Star Wars (Setting Aims that Compete): Episodes II and III. *Journal of Precision Teaching*, *5*: 86-94.
- White, O. R. and Haring, N. G. (1980). *Exceptional Teaching (2nd Edition)*. Columbus, OH: Charles E. Merrill.
- White, O. R. and Haring, N. G. (1982). Data Based Program Change Decisions. In M. Stevens-Dominguez and K. Sremel-Campbell (Eds.). *Ongoing data collection for measuring child progress*. Seattle, WA: Western States Technical Assistance Resource (WESTAR).