

The Learning Curve



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Knowing & doing

In February, *The Learning Curve* explained how numbers help you understand what is happening around you when ringing a method. This can also provide clues about what you should be doing. That article mentioned the difference between 'knowing' what to do and 'doing' it, with a promise to return to this second aspect, which is what we do this month.

The 'gulf of execution'

This technical term, used by ergonomists, graphically illustrates how hard it can be to get from conception to execution of an action. To see that there is a gulf with method ringing, think how we normally learn methods, with marks on paper – numbers, lines or diagrams – that bear no obvious relationship to what you can see in the tower. What appear on the paper are abstractions, and you have to know how to translate them into things that you can 'do'.

Figure 1 shows the sort of things that lie between the figures and lines on paper and the physical things you do on the end of the rope. Between each level there is some sort of translation, with the biggest translations when jumping from one grey box to the next.

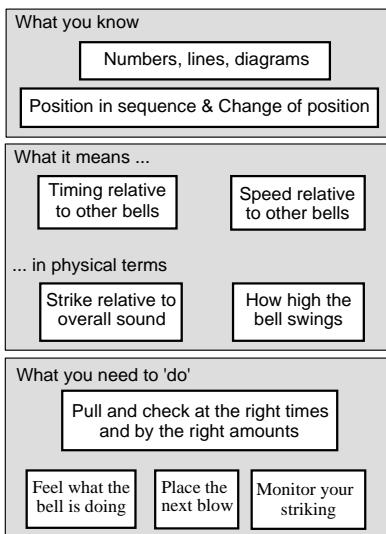


Figure 1: Knowing and doing

- The first transformation is a small one turning what you remember about the method into information about changing position.

- The second is a bigger one, because 'position' really means time, and changing position means speed.

- At the physical level, time is not absolute, but relative to the overall pattern of the other bells striking, and speed corresponds to swinging the bell higher or lower.

- There is a very big translation from the physical effect you want to knowing how much force to apply when.

- The final translation shows the underlying activities that enable you to do this.

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Let's think about the layers of skill needed at the 'doing' levels.

Handling a bell safely

For completeness, we'll start at the beginning. Numbers are academic - on a single bell, you must learn to feel the bell and how it moves. Even at this early stage though, you learn how methods work, between the 'physical' lessons.

Controlling the bell's speed

It's a pity more learners don't do this before they are confronted with a room full of ringers and ropes. There are many single bell exercises to develop a learner's awareness of, and ability to ring at, different speeds. Learning the rhythm of hunting (slow, slow, ... slow, normal, quick, quick, ... quick, normal, slow, ...) requires place counting in order to know when to change speed. The speed changes won't be accurate at this stage of course, but understanding place, and being able to make major speed changes on demand, is an important step.

Ringing Rounds – constant speed

Whether first done with a simulator or with a room full of ringers, rounds forces learners to fit in accurately with 'someone else's speed'. The fine adjustments needed are much smaller than needed to hunt, but the accuracy to fit in with the other bells is much greater than just practicing speed changes on your own.

To ring rounds, you must decode the sound of the bells, work out your own position within it, and learn to make corrections. It helps that the sound is cued to the movement of your hands (when they pass your face) but for most people, identifying your bell among the others means counting the blows from lead to your own position. With confidence, you should become less dependent on it though.

Ringing simple called changes

Place awareness is even more important when a learner begins to change places. A major weakness of conventional call changes, as the first step beyond Rounds, is that it suppresses awareness of place. Remembering the number of the bell in front of you, and the one in front of that, makes it hard to keep track of (the number of) your own place. Lose that, and you lose contact with the sound you are making - so your striking inevitably degrades. *Kaleidoscope ringing* is better in this respect. The calls name the places, encouraging the learner to focus on them, and pre-announcing the work to be done reduces the pressure on the learner.

Hunting – major speed changes

Being able to make major, sustained speed changes and fit accurately into the overall rhythm is the key to hunting. It's easier for a learner who has practiced the hunting rhythm, than for those reliant on knowing who to follow, but doing it accurately is still a significant step.

There are several ways you can use numbers when hunting. Counting your place reminds you when to change speed and turn round. It's not the only way though – you can use ropesight to spot when you are at the back or the front (not if ringing with a simulator of course) and a few people rely on hearing when they are at the back or front. Counting individual blows at this stage is a lot to do while also thinking about your place, and you ought to aim to sense where your bell is striking without doing it all the time, by knowing when it strikes in the cycle, and for example, 'hearing' next to the last, rather than 'counting'

from 1 - 5.

Many learners remember the numbers of the bells they follow. This is not a good idea – filling your head with bell numbers pushes out the place numbers, so it's harder to know where you are. Also, if you focus on the bell that you are following, you will find you tend to look at individual bells, which delays the development of ropesight, and makes 'spotting the next one' a much bigger worry.

In any case, try not to think in terms of 'following' bells, but instead try to see yourself 'moving through' the other bells, crossing the path of each one in turn. So whether you are hunting up or hunting down, there is always a 'next' one and one 'just passed'. Keep your vision broad, and you will find this much easier, and you will develop ropesight more quickly. Start by watching someone else hunting. Without thinking of bell numbers, you will find that you recognise the order in which the bells are met, as a visual pattern. It's alternate bells each way round the rope circle, and if you are on an inside bell, that sequence will pass 'through' you, alternately from left to right and right to left. If you get into the habit of looking straight across the circle, you can see all the ropes with your peripheral vision, which is much more comforting than having to keep looking round to find them. You will also spot any 'rogues' that aren't where they should be, which is essential for not being put out by them.

Ringing methods

With the ability to hunt properly, and perform a few other basic manoeuvres like dodging and place making, the main 'doing' skills are covered. Most ringers continue to broaden their doing skills, for example learning to turn in heavy bells, or mastering odd struck bells, but most subsequent development is more of a mental activity, ie about 'knowing' what to do.

This is where the power of numbers can really enrich the experience of ringing. You don't have to wait until you start conducting to watch the coursing order for example.

So should you learn the numbers?

The numerical side of change ringing is both fascinating and useful. Learners can begin to learn how methods work, about coursing orders, etc, before they fully develop the physical skills to ring them. This can help to maintain interest, as well as helping to develop more able ringers.

This learning is complementary to, and not a substitute for, developing the essential 'doing' skills of rhythmic change ringing, awareness of place and listening. Trying to shortcut this by 'learning the bells to follow' is counterproductive. It pushes out place awareness at a critical stage. It encourages reliance on visual rope following for movement cues, which tends to cause jerky, 'last minute' habits that spoil the rhythm. It encourages errors to propagate, as people follow each others' bad blows.

Horses for courses. Don't rely on bell numbers to develop basic 'doing' skills like hunting. Do enrich your understanding by learning how the numbers work in change ringing. It will also help you to survive mistakes (your own and other people's).

Tail End

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