Evolution and decay in ELT methodology and training

It may seem a long stride from biological evolution to talk of the evolution of English Language Teaching methodologies and training but the parallels are striking. We can learn something about methodology by looking at it as an evolving species rather than a fixed set of mutually exclusive organisms. We can learn something about methodological training by looking at the way information is transmitted generation to generation.

Paradigm shifts

Pace Thomas Kuhn, it is not at all clear that there have been sudden and seismic shifts from one methodology to another in English language teaching.

On the contrary, it is quite simple to see, for example, the overlaps between the various methodologies which have at some time been the most successful beasts in the jungle. Very early (I am talking 17th Century[1]) approaches to teaching shared some of the characteristics of Situational Language Teaching which in turn shares characteristics with current Communicative approaches. Audio-lingualism and Grammar-translation methodologies also share a focus on accuracy, for example. You can probably think of your own examples.

What is being suggested here is that speciation in ELT in terms of methodology is a gradual process akin to speciation in the natural world and not a discontinuous process. Speciation occurs naturally when members of one species are isolated, geographically or topographically, from others of the same species. In isolation, the population may evolve in response to its environment into a wholly new species unable to interbreed with its original population. Species on the Galapagos Islands present a clear example as Darwin famously noted. When methodological and theory training in ELT is isolated, geographically, culturally or institutionally, then a similar process of speciation may occur. Thus it is that we arrive at 'the CELTA methodology' or 'the IH way'.

The line taken here is that there has not been a series of sudden jumps, or saltations to use the evolutionary science term, but rather a series of smaller changes reflecting evolutionary pressures. This is more a kind of punctuated equilibrium[2], to use Gould's term. There has never been an instantaneous transition from one species of methodology to another. It often seems that way to people because a good deal of teacher training in this area focuses on differences between methodological approaches rather than the way in which they meld, get adapted and diverge.

Pre-requisites for evolution to occur

For evolution to occur naturally, three things are needed:

1) Individuals must vary slightly with respect to their physiology and behaviour. That is called **variation in the phenotype**.
2) Different characteristics of individuals must confer different rates of survival and reproduction. That is **differential fitness**.
3) Characteristics can be passed down the generations. I.e., the characteristics must be heritable. That is **hereditability**.

Can methodologies evolve?

Let us see how English Language Teaching matches up to these three phenomena.

1) **Variation in the phenotype**

   This is easy to show. Even working within the same general methodological approach, individual teachers will behave quite differently. Between methodological approaches (e.g., a structural, behaviourist approach such as audio-lingualism and a communicative, cognitive approach) behaviours will vary much more strikingly. Methodological approaches obviously vary.

2) **Differential fitness**

   Learners' needs, backgrounds, cultures and expectations vary and what may, in one setting, be acceptable to them may not be in another. Some learners expect rote learning and drilling, chanting and filling in gaps but others may not be happy unless they are engaging in interactions with other learners and the teacher and trying to get things done in the language. That is an environmental pressure on the organism (in this case, the methodology). The methodology adapts to its environmental pressures or goes extinct.

   Institutional demands vary, too. In one setting, it may be enough to be able to read and write the language adequately accurately but in another setting, oral and listening skills will be prized. That is another environmental pressure which may lead to adaptation.

   Examinations change. At one time, most examinations focused on easily testable language accuracy but it is clear that changes have been made. Now, many examination boards go out of their way explicitly to target oral and written communicative skills as well as formal accuracy. That is the backwash (or washback, if you prefer) pressure on the organism, i.e., the methodology.

   Add these and other pressures together and it is plain that certain methodologies (or parts of them) will be more fitted, that is to say, better adapted for certain settings. That is differential fitness.

3) **Hereditability**

   Anyone who has been trained or has trained others in English language teaching can vouch for the hereditability of methodology. Many initial training courses, such as Cambridge CELTA, work from the principle that tutors will demonstrate a technique or procedure and the trainees will copy it and incorporate it into their teaching. This is the monkey-see-monkey-do approach, also called sitting at Nellie's knee. More politely, it is called loop input[3]. Of course, the nature of hereditability is different in our case because we are not asserting that methodologies have genes to pass on to the next generation. However, they do have memes to pass on and many training courses deliberately set out to do that. Meme is a term coined by Dawkins[4] to describe an idea or behaviour which spreads from person to person. In meme studies, a worked out methodology with background theories, design elements and classroom procedures, would be called a memeplex (i.e., a cluster of memes). What is in question here is the quality and accuracy of the memes that are being transmitted.

Evolution of methodology is theoretically possible. All three pre-requisites are in place.

Does the content of teacher training evolve?

Training courses will vary between centres and trainers.

Most accrediting bodies, such as Cambridge English or Trinity College set down a clear syllabus for the content of training courses. The CELTA syllabus, e.g., contains (2.7) "Key strategies and approaches for

developing learners' language knowledge", the Trinity Certificate syllabus also has "This unit [1] covers methodology, teaching skills, teaching practice and related portfolio", the Trinity TESOL Diploma syllabus has (2.1) "A critical understanding of current and historical developments in language learning theory and teaching methodology, with particular reference to ESOL" and the Cambridge Delta syllabus contains reference to "theoretical perspectives on language acquisition and language teaching". The documentation is, however, silent when it comes to stating what the strategies, principles, theoretical perspectives and methodology actually are. That is left to the individual centres and tutors to determine.

In this environment, it seems arguable that variation exists so the first criterion for evolution is met. There is phenotypic variation.

Training courses in ELT take place in a range of cultural and institutional settings and the way training is delivered is very varied. The nature of the surrounding culture and the institutional demands will affect how suited both the manner of delivery and the content of training courses will be. We have, therefore, some evidence of differential fitness.

Finally, we come to heritability. Trainer training procedures are important in this respect. Because there is no single, recognised route to becoming an ELT teacher trainer, procedures will vary but what they almost always have in common is some kind of shadowing element. This involves the trainer in training observing more experienced trainers and being observed in turn by these more experienced colleagues who attempt to shape both the content and manner of delivery of training. There is, in other words, a *deliberate* attempt to transmit content and practice (i.e., memes or the memeplex) within the institution. Heritability is not only present, it is consciously built in to the design of trainer training.

Other causes of evolution

What has been outlined above concerns the best-known source of change and adaptation, natural selection. There are, however, two other well-known processes: **mutation** and **genetic drift**.

1) **Mutation**
   In biological organisms, mutation can occur when DNA is damaged by an external phenomenon such as radiation or the intervention of a virus or from replication errors (among other reasons).
2) **Genetic drift**
   This is slightly more technical and refers to the slow (or quite rapid) shift across generations of what are known as alleles of genes. Alleles are alternative forms of a gene that occur in the same place on a chromosome. They may have no obvious outward effect. If we start, e.g., with a population in which 50% of individuals carry one allele and 50% the other, it is possible to see that random selection from generation to generation may result in very different mixes of alleles. In small populations, the working of chance may result in the dying out of one allele which is then lost forever.

Both the processes described here can have positive or negative outcomes but mutation and genetic drift are more likely to result in decay than progress simply because there are so many more ways to be wrong than there are to be right.

Do methodologies exhibit mutation and memetic drift?

The core components of methodology, following Richards and Rogers[5], are theories of language and language acquisition, the design of teaching programmes and the nature of classroom procedures. These constitute, so to speak, the methodology's DNA.

Mutation may occur when an approach is poorly understood, poorly or partially transmitted or deliberately distorted by a trainer to suit a personal prejudice concerning best practice or even aversion or adherence to a particular philosophy. The DNA is damaged, usually malignantly.

Drift may occur when meme alleles within a methodology, for example, the (non)use of dictation or drilling within CLT, a focus on meaning or error exploitation in audio-lingualism and so on, are randomly excluded from the practice next generation of teachers. Drift occurs and is usually not beneficial.

Does methodological training exhibit mutation and memetic drift?

1) Mutation

   There are most certainly replication errors from generation to generation. So much teacher training (especially on initial training courses) is carried out by people who have observed and been trained by other teacher trainers in the same institution that some transmission errors can become fixed and passed on to future generations of trainers and their trainees. This is a form of Chinese Whispers and we know, from the children's game of that name, that passing on a message from one person to the next in whispers results very quickly in the message becoming garbled or very different from how it started. The game is known as 'Telephone' in the USA, by the way, and was known as Russian Whispers before it evolved into Chinese Whispers.

   A methodological approach which is accompanied by certain procedures and techniques can quite quickly become unrecognisable after two or three generations of trainers have slightly adjusted it or partially misunderstood what they have been told. In settings where most trainers were at one time trainees in the same institution, this is almost inevitable but even across institutions and great distances geographically and culturally, the process is observable.

   As was noted above, the problem is that such mutations are overwhelmingly more likely to be negative than positive because there are, by random processes, very many more ways of being wrong than right. In a famous example, a hurricane blowing through a scrap yard is less likely to assemble a working airliner than it is simply to move stuff around. The general principle here is that information, like everything else in the universe, tends towards chaos rather than order. That is the working of entropy.

2) Mimetic drift

   By a purely random process, too, ideas about methodology may be subject to memetic drift because certain concepts can exist within methodologies as alleles. For example, the terms register and style are often used to mean much the same thing and the mix of the allele for recognising them as different concepts and the one for conflating them may drift randomly across generations of trainees becoming trainers. Another example is the covert merging of communicative competence with oral communicative competence. It is the useful concepts that may die out first so we now have the watery term 'linkers' instead of a proper analysis of discourse, theme-rheme structure and deixis. One might say the same for use and usage or any other of the dichotomies of which English language teachers are fond.

   Again, we need to be aware that this drift in alleles is far more likely to be deleterious than beneficial.

So, the answer would seem to be that methodological training could be subject to both selective pressures to change and to change by mutation and memetic drift. The outcome is very significantly more likely to be decay in information than enhancement of information.

So what?

Actually, there are some significant implications.

1) Through transmission errors, teachers' understanding of what actually a particular methodology is, and what its characteristics in terms of course design and classroom procedures are, can (and arguably has) become blurred and inaccurate. At a theoretical level, many graduates of training courses can happily assert that they are approaching the classroom from a communicative perspective but, when asked to define exactly what is meant by that, vagueness is all.

   The result is that methodologies which have quite powerful and important underlying theories are put into practice in vague and inappropriate ways. An example of this might be a teacher's inability to deal with form (from a structural linguistic perspective) or to handle drilling (from a behaviourist perspective) in a communicative classroom.

   On the other hand, a methodology which has, in theory, a quite rigid set of procedures based on its underlying principles may be so loosely and inaccurately applied in the classroom that its value is nullified. Applications of learning styles theory, left-right brain lateralisation, task-based teaching, cognitivism and so on spring readily to mind as areas where a little inaccurate knowledge is a very dangerous thing indeed.
2) Methodologies themselves become indistinct through mimetic drift. If one makes enough small, and individually insignificant, changes to a classroom approach, it will not be long before the whole approach has become unrecognisable. This may not matter in practical terms but teachers (especially trained ones) are supposed to know not only what they are doing but also why they are doing it. If you do not properly understand where you are coming from, it is immeasurably more difficult to adjust your route or even to know where your destination lies.
3) Natural selection, however, may superficially be an improvement to methodologies because those that are fittest for their settings and the demands of learners, institutions and examination boards will be better able to survive (and be passed down on training courses). However, here there is another snag because natural selection also applies to training courses themselves. Once changed, things tend to stay changed for a long time and a methodological training well adapted to some settings will be ill adapted to others and fail or simply die out. Taking a well-adapted finch from one Galapagos island to another will probably not be a successful transplant. Even less likely to succeed is a moving a well-adapted rhinoceros from Africa to the Tokyo suburbs.

   Imposing jolly, humanistic, individualism in societies that value serious, purposeful, objective collaboration may be very unwise. Those teachers who have taken their shiny new certificates (gained in London, Milan, Madrid or San Francisco) to cultures which have very different expectations have discovered this to their, and their learners', costs. Arguably more appropriate methodologies have been 'evolved out', so to speak, from training courses altogether and gone extinct.
4) There are imaginable positives, too. For example, Communicative Language Teaching has evolved from its strong form (in which the teaching of forms at all was abjured) to a weak form which allows, indeed encourages, some teaching of form under some circumstances. This could be an example of natural selection pressures, because learners want explicit language form

teaching, or simple mimetic drift because the strong and weak alleles of the methodology have been unequally passed down (or up, if you prefer) the training ladder. The issue here, of course, is whether CLT has evolved so far away from its own principles that it now has none to speak of.

What is to be done?

There are options:

1) Do nothing

   Doing nothing assumes that methodologies and training courses and the information they impart will inevitably change by any of the mechanisms outlined here and there is nothing that can be done about it. We should accept the fact and stop worrying.

   If we take this course of inaction, it may be the case that certain methodological approaches that may have future or setting-specific utility will be all but lost to the profession.

2) Go back to basics

   Trainers and designers of training courses should make an effort to re-read the original literature concerning methodologies and cease to rely on what they learned on their training courses and by reading secondary sources. If this means dealing with Skinner's prose or Chomsky's equations, so be it.

   This procedure might also usefully involve being aware of the dangers of training trainers in the trickle-down fashion that many institutions adopt. Just as inbreeding leads to mutation and decay in an organism's DNA after a few generations, mistakes and misunderstandings are passed on along with the good stuff, the data decays and practice spirals after it.

3) Understand and manage the process

   By being aware of how approaches and methodologies may have evolved and the selection pressures that brought the adaptations about, we may be better placed to match our methodology to our setting and our training to the settings of our trainees. We can only do that if we have a clear understanding of the pressures which forced the evolutionary adaptation, of course, as well as a sound knowledge of methodological theory.

   Then we may be in a position to recognise current selection pressures and see where our methodology might be about to adapt itself. We could even adapt it in advance and that is something a gene cannot do.

   Equally, being aware of the likelihood of the entropic decay of information across generations of trainers will be a first step to stopping the rot.

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[1] See Howatt, A.P.R, 1984, *A History of English Language Teaching*, Oxford: Oxford University Press

[2] Eldredge, N and Gould, S. J., 1972, *Punctuated equilibria: an alternative to phyletic gradualism* in T.J.M. Schopf, ed., Models in Paleobiology, San Francisco: Freeman Cooper. pp. 82-115. Reprinted in N. Eldredge Time frames. Princeton: Princeton Univ. Press, 1985, pp. 193-223

[3] Woodward, T, 2003, *Loop Input*, ELT Journal Volume 57, 3, Oxford: Oxford University Press

[4] Dawkins, R, 1989, *The Selfish Gene* (2nd Ed.), Oxford: Oxford University Press

[5] Richards, J, and Rodgers, T, 2001, *Approaches and Methods in Language Teaching*, Cambridge: Cambridge University Press