

The final issue of ...

# ***RADICAL TEFL \*\****

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Electronic Version

This issue:

**Can philosophy provide entry points for  
understanding second language learning?**

## **SOME PERSPECTIVES OFFERED BY PHILOSOPHY:**

- From John Dewey: **Learning to speak EFL  
as a form of enquiry** Page 7
- From Wittgenstein: **Problems of standpoint and seeing in  
enquiry into second language learning** Page 52
- From the USA: **Pragmatism as an entry point for  
understanding second language learning** Page 71

## **ALSO:**

- **Pedagogy as handing over to the learner** Page 22
- **Teaching academic writing** Page 29

**\*\* 'Radical': “going to, or proceeding from, the roots”**

# ***RADICAL TEFL***

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Publishing Editor: Alistair L. Maclean

## **THE ELEPHANT IN THE TEFL ROOM:**

The question:

*“Through what process do individuals learn to speak a second language?”*

**Many TEFL/TESOL academics say that language learning is a social activity. But learning is ultimately done by individuals, as they work through their learning problems and difficulties. We lack a description of language learning which understands how individuals come to speak a second language, and of what happens as an individual learner moves from a first to a second language.**

**The first and main article in this final *Radical TEFL* offers a description of the process of an individual's second language learning which draws from John Dewey's insight that both thought and learning are a kind of *enquiry*. Dewey's analysis of what happens in learning starts from his insight that learning is a “coming-to-know”. Following up this idea, an understanding of learning will need to draw from an understanding of how enquiry works, because enquiry, similar to learning, is also a “coming-to-know”.**

**Dewey did not extrapolate for second-language learning his idea that learning has parallels with enquiry, and the first article here “*Learning to speak EFL as a form of enquiry*” attempts to do that work, pointing out parallels between enquiry as carried out in science ('science' understood as a method of enquiry), and by individual learners. Until now, perhaps distracted by the influence of language theory and social theory, work on language learning theory has not explored what theories of enquiry can contribute to descriptions of how second language learning, by individuals, takes place.**

(Alistair Maclean)

## RADICAL TEFL (2014-2019)

This will be the final issue of *Radical TEFL*. In launching *Radical TEFL* I had hoped to receive work and start debate about the foundations of TEFL/TESOL but apart from contributions by the late Alan Waters this has not happened. In that sense the project has failed, and so this, the seventh *Radical TEFL*, will be the last one which I publish. In any case, seven years is perhaps long enough for one project.

But also, I started *Radical TEFL* to clarify and to work out my own thinking on TEFL. I have now done this, and so for me, *Radical TEFL* has been rewarding. In my work for *Radical TEFL* I have explored links between other fields and the study of second language learning and teaching. I concluded that second language studies can learn from the classroom; from work in mainstream education; from educational psychology; from the history of how other practical fields grow and develop; and from philosophy.

Most of all, I concluded, studies of second language learning can learn from John Dewey's insight that learning is often a kind of enquiry (See the article in this issue *Learning to speak EFL as a form of enquiry*). This is directly linked to work in philosophy which suggests that coming-to-know (ie, learning) is a synthesis or exploration carried out by individuals.

It was not my plan when I started this project that the pages of *Radical TEFL* would be filled with my own articles, but that is how it turned out. In my reading and researching (with my classroom experience in mind) I followed the links I saw between work in other fields, and the study of language learning. I then wanted to offer those links and arguments to others, and that work is now done. I hope that my articles may contain fragments and ideas which will provoke and help others to move forward on their own teaching or research problems.

I describe further the context and aims of my work for *Radical TEFL* in the *Introduction to Radical TEFL 7*, and in the *Concluding Postscript* here. A list of work published in *Radical TEFL* (2014-2019) is given at the back of this issue, followed by some ideas for "Further Work". If anyone, or any group, would like to take over *Radical TEFL*, please contact me.

Alistair Maclean

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No other material was submitted for publication.**

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# INTRODUCTION TO *RADICAL TEFL* 7

## The context and aims of work in this final issue

At the moment TEFL is largely influenced by language theory and social theory, and in my work for *Radical TEFL* I have looked at what other fields might offer as further entry points to understanding how a second language is taught and learned. I explore here work from mainstream education, from philosophy, and from the history of science and of practical fields. Ideas presented in this work come from thirty years of secondary-school teaching of mathematics and EFL, clarified by reading since I withdrew from the classroom.

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### Our problem

Language studies and social studies have come to dominate both thinking and claims about teaching EFL, but those ideas are not always qualified or checked by the realities of teaching large classes, and their limitations pointed out. In mathematics education, by comparison, many significant thinkers such as Richard Skemp at the University of Warwick had taught mathematics in secondary schools for several years before moving to the academy. But we in TEFL/TESOL have few people with feet in both learning theory and the practicalities and difficulties of secondary classrooms.

Much work in TEFL the last 30 years was developed in the ideal conditions of small, cooperative classes, and not tested in larger classes, or with disaffected learners. But practical fields such as engineering and industrial chemistry understand that what works on a small scale does not necessarily work on a larger scale....

### The Neglect by TEFL in the UK of Mainstream education

Work in Education which understood the link between the realities of pedagogy and learning (especially during the 1980s), and which might have provided a basis for a theory of TEFL pedagogy, was neglected by TEFL/TESOL studies. Examples are work in the UK on the classroom and teaching by James Calderhead at Lancaster University, by Donald McIntyre at Oxford and Cambridge, by Lawrence Stenhouse at the University of East Anglia, as well as work in the USA in the 1980s which was published in the journal *Educational Researcher*. This work was not taken up by TEFL, and also, a tradition of exploring the learner's problems in moving from a first to second language was eclipsed as communicative language learning seemed to become the “official” approach to language teaching, sponsored by the influential British Council.

Although some TEFL/TESOL academics have paid attention to pedagogy (for example, the late Chris Brumfit, Donald Freeman and Simon Borg) no-one so far as I know has offered a theory of pedagogy for TEFL, nor a unified theory which connects pedagogy and learning. We have many studies of TEFL learning, but these are not integrated with studies of teaching. If, as education argues, teaching and learning require to be understood together, then we require theory which links them, with classroom implications ...

What to do? In this issue of *Radical TEFL*, I offer work which proposes understandings of pedagogy. The article, *Pedagogy as handing over to the learner* takes as its entry point an insight from education that pedagogy is work of “handing over”. The article, *Teaching academic writing: teaching as anticipating and preventing problems*, developing that article, draws from another insight in pedagogy: that a role of the teacher is to anticipate the learner's problems. I present my experience of how I taught academic writing with the aim of anticipating and preventing problems often met in learning writing. These two articles explore the insight from education that pedagogy is as much about understanding learning as about understanding 'teaching': and that learning and teaching cannot be treated separately. An understanding of pedagogy first requires an understanding of learning ....

### The learners' standpoint

It is easy to lose sight of the individual student, his individual learning problems, and his needs from the teacher and from a lesson, and the short article, *How does the EFL student see teaching?* starts from the learner's standpoint, and asks some questions on the learner's behalf. Perhaps we require a whole new theory of TEFL which starts from the learner's cognitive standpoints towards learning and language, and the learner's standpoints to the teacher, and 'teaching' ... ?

### Parallels between how learning works and how practical fields develop

The article, *How practical fields develop, with implications for understanding the development of EFL teaching* is in the form of fictitious transcript of a seminar, where an historian of technology proposes that, if we can understand how practical fields grow and develop, then there may be lessons for understanding how the practical field of pedagogy grows and develops. Understandings of language have benefited from studies of how languages have historically developed, and the same historical approach might help us to understand pedagogy ...

### Philosophy

My own background is in philosophy. Four articles here argue for a place for philosophy in understanding second language learning:

1. *Pragmatism and related work in thought and philosophy as entry points for understanding second language learning;*
2. *Concluding postscript;*
3. *Problems of standpoint and seeing in enquiry into second language learning.*
4. *Learning to speak EFL as a form of enquiry*, where I offer a description of learning to speak a second language which draws from an insight by Dewey that learning is a kind of enquiry. This article draws from Dewey's work on theories of enquiry, and attempts to describe how students work through their individual learning problems, identifying parallels with learning and with enquiry in other fields. Dewey believed that learning and thought were forms of enquiry.

I hope that some of these ideas might be found useful by others.

Alistair Maclean  
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# LEARNING TO SPEAK EFL AS A FORM OF ENQUIRY

Alistair L. Maclean

**NOTE:** The characters who are portrayed, as well as the 'University of Vierkirchen' in Bavaria, are fictitious. The format used here, of a seminar transcript, allows a thesis to be presented, with clear and short questions, objections and contributions from others, and for replies. Dialogues or discussion were widely used in the past as a way of presenting a thesis, and for considering objections to it. A transcript format also allows two people (Grunewald and Klara), working on a common problem, each to speak for themselves. A one-page summary of the article is given at the end of it, after Grunewald's handout. (Page 21)

This article explores implications for teaching EFL of John Dewey's insight that learning, thinking and enquiry share common features, and that an understanding of one of these can help us to understand the others. (*How we Think*, 1933). The article offers a theory of EFL learning which does not rely on language studies, but which conceives the student as an enquirer, or explorer. (AM)

## INTRODUCTION

The small, fictitious, University of Vierkirchen lies in the hills of Bavaria, in the south of Germany. This university encourages different disciplines to learn from each other, and once a year, following a condition in its founding charter, an all-day seminar is held on the topic "Understanding second language learning and teaching". The university's charter requires that speakers are invited from different faculties and departments within the university. The charter also requires cooperation with local schools. The Chairperson of the Modern Language Learning and Teaching department opens the afternoon session.

**(Chair)** Ladies and Gentlemen, since we are meeting to discuss language learning, we are holding this year's seminar in English. That means that, even if you do not find the papers or discussion helpful, at least we can brush up our English. This afternoon, Professor Grunewald from our Philosophy Department will address us. Professor Grunewald's most recent book is on scientific enquiry and the growth of knowledge. He will share his presentation with Frau Klara Denklich, who is writing a thesis with him, and who works as an English teacher at the "Goethe" secondary school in our town. We shall stop for an English afternoon tea at exactly 3. 30.

Professor Grunewald and Frau Denklich – I am sure we are all interested to know what the connection might be between philosophy and second language learning – the floor is yours.

**(Professor Grunewald)** Good afternoon, colleagues and guests. Yes, we would like to argue that there is a link between work in philosophy and the work of second language learning. Frau Klara and I have worked together in the following way – she has proposed an hypothesis about language learning, I have researched the literature related to her hypothesis, and Klara has explored the hypothesis in her English classes. Klara will report on what she observed in her classes, and I

will try to provide a framework for her work. Over the last two years I observed many hours of English lessons in Klara's school, and I also taught my own language, German, to an American engineer who is working in a factory in our town. In this way, I was able to observe the second language learning process.

Philosophy, just like other fields, has different branches. The branch of philosophy which I am interested in explores how knowledge grows, and how we can make provisional claims to knowledge. We would like to argue this afternoon that the second language learner is in part an enquirer, making claims to knowledge. Please interrupt us with questions, as this will help us to gather our thoughts. Frau Klara, would you now describe the learning problem and hypothesis which you brought to me?

**(Frau Klara)** I teach English to teenagers in classes of about 16. They often specialise in scientific or technical subjects, and are not very motivated to work on their English. Now, in my training I was told that correction can discourage learners. But they make so many mistakes, both in writing and in speaking. Worse, the mistakes stay with them, and their English never becomes really accurate. This was my problem. I also teach a friend of my father English after school, individually, and he asked me to write down his mistakes for him. He was paying me, so I did as he asked. After a few months he could speak and write English accurately. I thought that I needed to do more to correct my students' mistakes, and decided to write my Master's dissertation on this topic. Professor Grunewald heard about my work, and asked me to work with him.

**(Grunewald)** Klara's students had a problem – their English didn't seem to become more accurate. Klara also had a hypothesis about what to do – more correction. She also had the opportunity to experiment and test her hypothesis, and her students also had plenty of time in their lessons to work on their mistakes. But this is how knowledge grows – problem, hypothesis, and scrutiny in the form of, for example, experimenting or trying out the hypothesis.

**(Klara)** But what really interested me was trying to understand the problem from my students' point of view. I wanted to put myself in their position, to adopt their standpoint.

**(Grunewald)** I discussed this with Klara, and told her that in history, the study of the past, there exists a tradition, inaugurated by Vico, where one enters into the standpoint of those who lived in a given era. This method could be used with her students, in the following way. We could regard *them* as having a problem, *them* as having an hypothesis, and then study *them* doing the experimental work. For example, looking for dis-confirmation of their understandings of the English system. In other words, we could regard learners as experimenters. <sup>1</sup>

The suggestion that second language learning is a kind of enquiry is not new, and can be found in the pages of the journal *Applied Linguistics*, where Herbert Seliger wrote in a paper given at a contrastive linguistics conference:

*“The linguist (as scientist) and the language learner do share many characteristics ... Both are involved in the forming and testing of hypotheses: both are involved in the construction of a theory ... for the learners, feedback on 'experimental' hypotheses consists of responses from interlocutors, teacher correction, and other sources “*

We also find in Karl Popper's autobiography the idea that all learning is a modification or perhaps a

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<sup>1</sup> Seliger, H.W. (1983: 180-83 & 189), *The Language Learner as Linguist: Of Metaphors and Realities*, *Applied Linguistics*, 4/3



disconfirmation of what we already claim to know. <sup>2</sup> Popper was a school teacher for two years, teaching physics in Vienna, and he may have found that idea then. We find in the work of John Dewey the idea that learning and the growth of knowledge are linked, for, as John Dewey observed, learning is 'coming-to-know'. Could it be that learning is, sometimes, a kind of enquiry? Are learners, in some ways, enquirers?

I decided to investigate the literature further, and so to provide Klara with a framework for her study. Klara, meanwhile, would use her classroom as a “laboratory”, as a place to scrutinise and try out her hypothesis. We would, hypothetically, regard Klara's students as experimenters or enquirers, and then scrutinise that hypothesis through observation of their learning. Although we would be setting up a study, we would also regard the students as experimenting and setting up their own studies – which of course, we call “learning”.

**(Questioner)** So you have a hypothesis within an hypothesis. You are investigating the students, who you regard as themselves being investigators.

**(Grunewald)** Yes, you may put it like that.

**(Questioner)** That's an unusual approach to investigating language learning.

**(Grunewald)** But often used in history, and in other fields. Now, I would like to emphasise that, in our study, we were not primarily concerned about the psychological mechanisms used by learners. This is work for the fields of educational psychology and for cognitive science. We were interested to look for parallels between the learning process and the process used in enquiry. Also, we are not specialists in the second language learning literature, and we simply present our work to you today. Whether it is relevant or not for helping an understanding second language learning is for specialists in that field to decide. The best way to use our time now will be for Klara to describe the work which she did, as she scrutinised our hypothesis in her work with her students, at our local “Goethe” secondary school, here in Vierkirchen.

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## **1. EVIDENCE FROM THE CLASSROOM LINKING ENQUIRY AND LEARNING**

### **1.1 The learner as experimenter**

**(Klara)** Learning to speak seems to require generous time given for practice. But why? And what is going on in practice? I spent many hours observing my students practising, and I tried to understand their learning strategies. As I worked, and helped by discussions of my work with Professor Grunewald, I came to believe that practice is a kind of informal, ongoing, experimental enquiry by the student. In oral practice, a student seems to be “trying out” his understanding, to see if his provisional understanding works. He is perhaps “experimenting”, with the word 'experimenting' used here in the sense of 'a trial, or attempt'. <sup>3</sup>

We can perhaps better observe this experimental work as a student practices his writing, where the process is more reflective and considered, and where evidence remains for examination. We can see the student retrace his steps, amend his understanding as he checks and reconsiders his work. We see him rejecting some attempts completely by crossing his work out, and amending his ideas

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<sup>2</sup> In chapter 10 of his (1972) *Unended Quest*, Fontana.

<sup>3</sup> This understanding of learning to speak a second language is explored in my (2019). However, that study left aside the question of how, strategically (but not psychologically), the learner does this experimental work.

by making small alterations to word endings, etc. I thought – but my students are experimenters.

**(Grunewald)** Nowadays, the word 'experiment' has the narrow meaning of a controlled study, where some variables are held constant, and where the raw data from the study is treated to a statistical analysis. However, the work 'experiment' in its original form (before the 17<sup>th</sup> century scientific revolution) had a different use, and simply meant *a trying-out or trial or attempt*, in a local situation and in the context of a local problem.<sup>4</sup>

In a practice activity, a student is perhaps working in a way similar to an enquiry, as he moves from provisional hypothesis to provisional confirmation of his understanding. To do this work requires the student to be self-critical; to ask questions to himself; to act on feedback; and perhaps as a result to re-arrange his understanding. In practising, the learning student allows himself to be open to correction and to improvement. He is 'experimenting' in the original, pre-scientific revolution, sense of the word – 'trying out, trialling'.

**(Klara)** In a pair work role play, you can observe a student as he himself observes his partner closely as he speaks to him, to obtain feedback on the effects of his words. He seems to ask himself, 'Am I being understood?' If his partner does not respond, not understanding, the student who we are observing may reformulate what he says, perhaps saying in a different way. It seems that the student is working like an enquirer, looking for confirmation or dis-confirmation, working in a loop between provisional understanding and reformulated understanding.

**(Grunewald)** That is, the experimentation work can be understood as work of scrutiny – and this is exactly how 'experiment' is often understood in good science. Experiment is not (as sometimes thought by those who have not done science) a way to establish fresh knowledge, but rather, experiment is a strategy to *put to the test or to trial* a provisional knowledge claim, with the aim of identifying that claim's weaknesses. Good science does not try to confirm, but tries to disconfirm. In this way, the most robust ideas and knowledge claims can live on. In the same way, Klara and I observed, the successful language learner is the one who moves on from his inadequate or incomplete understanding or performance, to an improved one, and this work is done by self-critical trialling.

## 1.2 The learner as scrutiniser

**(Grunewald)** Scrutiny is a key component in scientific enquiry, where claims can be examined. Scrutiny can be built into a field, for example, experiments are repeated by colleagues, or claims made in academic papers are challenged. In this way a field staggers forward, often retreating, and in learning we can find something similar, as follows. Klara?

**(Klara)** A good learner, I observed in my classrooms, is one who is open to critiquing his work: he looks out for his mistakes; or double checks his writing or speech. He acts on teacher feedback rather than resenting it. During a role play a good learner seems to be constantly asking himself if he could express himself better. The poor learner assumes that his first effort is sufficient. His aim is to pass, rather than to do better. The good learner is not always cleverer than the poor one, but is more self-critical and persistent. He scrutinises his output. I should add that

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<sup>4</sup> See Toulmin, S (1990), *Cosmopolis: the Hidden Agenda of Modernity*, Chicago. On lost traditions in methods of enquiry, see esp. pp 29-36; 70-83 & 168-193. A recently-published history of the scientific revolution by David Wootton (2015: 346-48; 394ff. ), *The Invention of Science*, traces how reliance on experience (or simple observation) was replaced by the contrived and artificial 'experiment' under controlled conditions.

before Professor Grunewald agreed to work with me, he asked me to read Karl Popper's books.<sup>5</sup>

I concluded from my classroom work that learning is not just about accumulating, but about unlearning and about retreating – but learners need a teacher to encourage them to do this. I encourage scrutiny by the student to become an integral part of learning. For example, I can identify specific problems which require looking at again, and set further work on that topic, because a wrong turning by a learner is generally only a symptom of an underlying misunderstanding or misconception. Or, I may repeat a lesson when I see during the lesson that a topic was not grasped. There is a loop or circuit in operation in the learning of an ability such as writing a second language, or in playing a guitar<sup>6</sup>. In a typical lesson students will go through a stage of getting wrong answers, trying again, and then getting it right. Success in learning is preceded by failure, but success cannot be turned into failure without an intermediary scrutiny stage.

This understanding of learning gives a new significance to mistakes. Failure and 'mistakes' can be a learning opportunity, because through failure a new problem is presented, or the existing problem can perhaps then be seen differently, and so an opportunity is given to propose a fresh hypothesis, which in turn can be tested, and perhaps also found to be faulty. In this way, failure is a central part of the three-stage cycle of the development of knowledge: problem; hypothesis; scrutiny.

**(Grunewald)** The same occurs in scientific enquiry: scrutiny of a knowledge claim, with this followed by returning to either the problem or to the claim. Often, the problem requires clarification or amending. It is in through this process of repeated failure that knowledge grows. I should add that the three-stage process is not mine, but was first observed and explored by both Dewey and Popper in the 1930s, working independently of each other.

### 1.3 OTHER SIMILARITIES BETWEEN ENQUIRY AND LEARNING

**(Grunewald)** I would like to emphasise that today we are only presenting a suggestion, an hypothesis, proposing a link between enquiry and modern-language learning. However, from the brief examples, just given by Klara, of what she observed over hundreds of learning hours in her classes, we have indications that learning is a form of enquiry. There seem to be many other similarities between enquiry and learning, but which we do not have time to explore today. For example, both seem to need a problem to get started. It follows that if the learner is not clear about the problem he is being asked to address, then he cannot get started on the required work. Another similarity is that both enquiry and learning seem to involve a period of state of doubt. The student's problem may be that he does not understand the new work. I have summarised some of these further similarities in a handout, which I will give out when we stop for our English afternoon tea.

(Professor Grunewald's handout is given immediately after this article - AM)

I might mention some further apparent similarities between enquiry and learning: first, both have the creative ability to see connections or patterns in what appears to be chaos; successful second language learners are 'good guessers': that is, they are good at setting up hypotheses. But then the hypothesis requires to be tested. As Herbert Seliger observed, the learner relies on feedback on his

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<sup>5</sup> **Popper**, Karl, (1994, tr. 1999), All life is problem solving, for paper 1, "The logic and evolution of scientific theory", Routledge. This late paper (and the next work cited) clearly outlines his thinking on how knowledge grows: scrutiny acts as a check on knowledge claims; and **Popper**, Karl, (1994), ed. M. A. Notturmo, The myth of the framework: In defence of science and rationality, Routledge, esp. pp 58-59; 68-71; 74-75; 82-101 & 144-149.

<sup>6</sup> On the teacher's role of identifying student weaknesses in learning to play a guitar, see Marcus, Gary (2012: 70-79), Guitar Zero: The science of learning to be musical, Penguin/Oneworld

experimental hypotheses from interlocutors, teacher correction, and other sources. Negatively, both enquirer and learner are at risk of the trap of confirmation bias, in that both may not want to acknowledge data which dis-confirms an hypothesis. Finally, a learner is developing for himself a provisional theory of language, just as a scientist develops a theory. More similarities are given on the handout.

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## 2. PROFESSOR GRUNEWALD'S THEORETICAL FRAMEWORK

**(Grunewald)** Frau Klara introduced Popper's thinking on enquiry earlier, and I will now refer to John Dewey's understanding of how enquiry proceeds. The thought of these two philosophers is quite consistent with each other, and they came to their conclusions independently of each other, in the 1930s. The similarity in their thought is because both were influenced by Kant, who challenged the assumption that certain knowledge about the physical world was possible.

Two ideas of John Dewey are relevant for this study, both deriving from Kant. Firstly, new knowledge is understood by an individual in the context of prior knowledge and prior assumptions, and so the new needs to be understood in the context of that prior knowledge. The pedagogical implications are many. Secondly, We do not learn isolated fragments, but in context. These ideas can be found worked out in gestalt learning theory, in schema theory and in the work of Piaget, von Glasersfeld and other educators. For Kant and those who follow him, real cognition always involves synthesis or connection.

For Dewey, learning is a kind of 'coming-to-know'. In his main works on this theme <sup>7</sup> he compared learning to the growth of knowledge, although he did not present his thinking on this in a fully worked-out way. He suggested that the proactive learner is an explorer or experimenter, in a way which is not different in its essentials from a scientific investigator. He suggested that the enquirer (whether layman or scientist): first begins with a problem met in a problematic situation; then he forms a judgement or hypothesis as to what a resolution of the problem might look like; and thirdly he then tests this judgement (or 'theory') against evidence, and against reality. <sup>8</sup>

May it be that some of the above features occur in some kinds of 'learning' of EFL? For example: the student starts from a problem or state of doubt (his problem may be that he does not understand the new work); <sup>9</sup>he tries out some ideas to see if they work or not, and to see if they 'fit in' with his existing understanding; if necessary the student confirms his provisional understanding from data obtained, or, he sees that he must think again.

If learning is, as Dewey suggests, and in this kind of way, a kind of (scientific ) enquiry, then we have a key and entry point for fresh enquiries into understanding learning process. If this line of thought was followed through, it would open up a way to understand 'learning'. For Kant, Dewey

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<sup>7</sup> John Dewey (1910/1933), *How we think*, and John Dewey (1938/1984: ch. VI), *Logic: the theory of enquiry*. Also see his (1916) *Essays in Experimental Logic*.

<sup>8</sup> See Dewey (1938: ch. VI). Dewey's theory of enquiry is presented in Maclean A.L., (2017), *Re-conceiving 'teacher research' with the help of John Dewey's theory of enquiry*, *Radical TEFL*, 4, Free download at <http://radicaltefl.weebly.com>. Source for Professor Grunewald's quote and claims about Dewey are cited there.

<sup>9</sup> For Dewey “*reflective thinking (ie, effective learning) ... involves a state of doubt (and) ... an act of searching, hunting, enquiring to find material that will resolve the doubt, settle and dispose of the perplexity ... we metaphorically climb a tree, we try to find some standpoint (ie perspective) from which we may survey additional facts and, getting a more commanding view of the situation, decide how the facts stand related to one another ... we must be willing to protract doubt*” (Dewey 1933: *How we Think*, pp. 12, 14 & 16).

and those educators who they influenced, learning, and the thinking that brings it about is not work of addition or simple acquisition, but is rather work of organising, grouping, classifying, and re-organising as new input becomes available, in the context of prior knowledge. In this sense, we make our own knowledge. One implication for teaching is that the teacher can only provide a starting point for the learner to do this synthesising work, but cannot do this work for the student.

Dewey actually writes that all knowledge involves experimentation, which implies that a learner is experimenting. Although he does not develop this idea, Dewey understands learning as including: guessing; classification of new information; reflection against other data; “running over various ideas; developing new suggestions; comparing with one another”, carrying out “thought experiments”; experimentation and trial and error; hunting for insights and for unifying principles; looking for analogy with what is already known; comparison; and abandoning attachment to an idea. Dewey understood learning as coming-to-know. For him, coming to know, or enquiry, is dynamic. He writes, “every special inquiry is ... a progressive and cumulative re-organisation ... a process ... of transition”. For him, helpful knowing or learning is not an end result, but is a process. And for him, both learning and enquiry occurs in a loop or circuit, with many parallels.

Now, the British philosopher of education Paul Hirst observed that getting to know a school subject is less like climbing a ladder (as often supposed in teaching), and more like getting to know a foreign country. A Kantian-Dewey 'constructivist' theory of learning understands the learner to be often constructing maps or schemas (schemata) for himself. With such maps the learner can orientate himself to understanding new input, and can address fresh but related problems. In both enquiry in an intellectual field, as well as in learning by an individual, in each case it seems that those learner-enquirers are constructing or re-constructing, or re-arranging, fresh maps.

The interesting question for educators here is: How far are the enquirer and the learner doing similar work? If there are similarities, then insights obtained from understanding how enquiry works might be helpful for understanding how some learning takes place. It is beyond the scope of this study to systematically follow up this comparison, but the idea of 'map' or 'schema' may be helpful - with a map understood as a resource (or store of joined-up understanding) for synthesising otherwise isolated fragments of 'knowledge'.

Such understanding – a synthesis - results in a more coherent whole, because relationships are made clear. The learner's central problem seems often to be that he doesn't see how new input “fits in” with what he already grasps – he does not see the whole. And the language learner perhaps does not separate his first and second language – he is trying to rearrange his total conception of language. The first language is both a distraction to this work, and a help, but the learner does not not always see which.

It seems that in both enquiry and in learning, the project is to see the whole. Dewey's believed that thinking, enquiry and learning have much in common. For example, when successful, they proceed through the same self-correcting circuit of core stages – problem; provisional knowledge claim; scrutiny. They both make progress through asking good questions. It would be interesting to look for more common features, as a way of better understanding learning, and I have summarised more features which are common to the process of enquiry and to learning on my handout. I suggest there that there are at least a dozen similarities in the processes.

If knowing is a kind of enquiry, and where the knower is using a combination of logical and psychological strategies, we may have found entry points to better understand his learning work, and so by extension, we may propose insights or implications, or working hypotheses, for seeing more clearly where and how we might help him.

An implication of understanding learning as a kind of enquiry is that in order to understand learning we first need to understand how enquiry works, and as Karl Popper has observed, the way in which enquiry works is often not well understood. For example, in enquiry, the role of experiment is normally to scrutinise claims and not, as often believed, to establish new claims. Also, hypotheses are important to enquiry, just as much as fresh data. Much good enquiry doesn't generate fresh data, but simply tries to make sense of what was already visible.

The process of enquiry is multi-faceted - but in order to reduce it to manageable proportions, we need a model of enquiry made up of simple, core factors, although at the price of a simplistic understanding of enquiry. The three-stage description of enquiry as given by Dewey and Popper is a necessarily incomplete and idealistic one, omitting other practical factors and influences.

**(Dr. Deidaglich of the Education Department)** What you say is very interesting, but a classroom is often a chaotic place. But enquiry requires clear calm conditions to work, doesn't it? Can we really compare the classroom with an enquiry taking place under ideal and artificial conditions?

**(Grunewald)** But enquiries are, also, often messy, confused, and distracted by real life. Taking as an example the period 1500-1700 (the Copernican revolution), we can see that there were many other factors influencing enquiry then, important for those who were enquiring, but now almost forgotten: the influence of magic, of neo-platonism, and so on. Those distractions were endless. So your point, Dr Deidaglich, is absolutely correct. We have found yet another comparison between enquiry and classroom learning. The existence of factors which distract enquiry is relevant, and must be taken into account, if we want to offer an argument that a learner is a kind of enquirer, as he will also perhaps have many factors which prevent and distract him from doing his work: peer pressure; perhaps poor materials; a rowdy classroom; lack of parental encouragement; and so on.

**(Klara)** That's right. An experienced secondary school EFL teacher soon discovers that, when she has a motivated and cooperative class, then students approach materials, learning tasks, and learning problems in a quite different way from classes where chaos reigns and disruption of learning occurs. In the latter, distracting factors can be too much for the quiet, serious learner. He needs a quiet classroom – but there is competition in a school for places in such classes. Secondary teachers know that, because of lack of discipline and lack of interest by learners, some classes learn very little, as the students who want to learn do not have the calm and concentrated atmosphere required. This means that the idea of learner-as-enquirer is 'only' an ideal, but an ideal which can be tried for. Much of the work of routine teaching is an attempt by the teacher to create the conditions where those who want to learn can do so, in this sense a classroom is a battlefield, a difficult and unpleasant concept to accept for those who do not work in difficult (and even average) schools.

**(Dr. Syntax from the Linguistics Department)** Frau Klara and Professor Grunewald seem to make a good team – one person provides the ideas, and the other checks them against classroom realities. Then, what remains, and works, can be used.

**(Chair)** Thank you, Dr. Syntax, for that generous observation. Yes, we see theory and practice working together. Now, we have 15 minutes left before tea, for questions and discussion.

### 3. QUESTIONS, OBJECTIONS, DISCUSSION AND FURTHER WORK

**(A questioner)** Did either Dewey or Popper, starting from their understanding of how enquiry works, explore implications for pedagogy and for learning?

**(Grunewald)** Not so far as I know. Popper was interested in how scientific knowledge grows, and Dewey, a very important philosopher, gave most of his attention in the last part of his life to the link between education and social questions. I think he did not explore implications of his work on enquiry for the teaching of specific school subjects. And I do not know of work on this by others.

**(Another questioner)** Professor Grunewald, this afternoon, Frau Klara and yourself have offered an hypothesis, an understanding of learning to speak a second language as a kind of enquiry. You, yourself, have also said that in enquiry there needs to be a scrutiny stage. How can your hypothesis be scrutinised?

**(Grunewald)** The question is a fair one. It is, indeed, only an hypothesis that we have put forward today. Although Klara has introduced evidence from her own classrooms, this of course is not enough. A huge amount of work needs to be done to develop and scrutinise this idea, and you are right. I would suggest that this work should take place mostly in classrooms, in real time, where all the often-chaotic and interacting variables in language learning can be acknowledged. We also require a programme of study of the relevant educational psychology literature – not only on language language, but on other kinds of ability learning.

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**(Dr. Syntax from the Linguistics Department)** The ideas which you have presented seem to offer a partial answer to the question of how an EFL learner, in his speaking, moves from competence to performance.

**(Grunewald)** A partial answer, yes, perhaps. I have proposed that the learner makes this transition through a process of informal experimentation. The process resembles the way in which practical fields such as engine design grow.<sup>10</sup> The learner makes use of propositional knowledge as reference points, and brings that knowledge into confident use through a trial-and-error process.<sup>11</sup> One may regard the learner's work here as his solution to moving from competence to performance. The learner seems to do this work autonomously, with the teacher and materials setting up the conditions for him to do it.

**(Dr. Syntax)** But in your presentation you did not start from or acknowledge the competence-performance distinction. Why was that?

**(Grunewald)** The omission was deliberate. Firstly, I like to know what is meant by a word before I build an argument which uses that word, and the deep meanings of “competence” and “performance” are not clear to me, nor, I suspect, clear to the users of those words. Secondly, I have tried to present an understanding of the learner's process of *coming-to-know*. In order to do this – and the key word here is *know*, my approach to addressing this question requires to start from and derive from work in epistemology, and on the growth of knowledge. My starting point is that of a

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<sup>10</sup> See Maclean, A.L., (2020), “*How practical fields develop ...*”, published in this issue of *Radical TEFL*.

<sup>11</sup> See Maclean, A.L., (2019), *Radical TEFL*, 6, “*Propositional knowledge, practical knowing and learning to speak a second language*”. Available as a free download from the Radical TEFL website.

philosopher, and not of language specialist.

**(Chair)** Could you develop that a little?

**(Grunewald)** Epistemology claims that there are two kinds of knowledge, and which we may very loosely equate to competence and performance. Philosophy has given considerable attention to how knowledge grows, and the work on this is done in that branch of philosophy which studies the growth of knowledge (Dewey 1910/1933 & 1938: ch. VI; Popper 1994 & 1999). It follows that those linguists or applied linguists who are interested in the question of how knowledge for the learner grows - how the learner comes-to-know, or learns – might refer to that literature.

**(Chair)** That is very interesting. You suggest that studies of language learning might pay more attention to work on the growth of knowledge - and that is what you have done today, for us.

**(Grunewald)** Not only refer to work on the growth of knowledge, but also to refer to work on learning theory and to educational psychology. And if learning to speak is one example of the more general problem of how skills or abilities are learned, second language studies might refer to other skill-learn school subjects, for example, mathematics, to see what might be learned from studies of how they are learned.<sup>12</sup>

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#### DISTINGUISHING BETWEEN PSYCHOLOGICAL AND LOGICAL ASPECTS OF LEARNING

**(Chair)** Let's move on. I see that Dr. Schmidt has a question.

**(Dr. Schmidt from the Psychology Department)** What you say is very interesting. Studies of how foreign languages are learned might look at work on practice in other fields, I would suggest the work of K. Anders Ericsson... But my question is as follows ...

In the field of second language learning studies, it is sometimes argued that different people learn in different ways, using different psychological strategies. For example, some people are visual, some people like to hear the language, and so on... You have not referred to that in your work. But can it be neglected?

**(Grunewald)** We have no quarrel with approaches to understanding second language learning from a psychological view- we just offer another, hopefully complementary, perspective. But your question raises the point that there seem to be at least two processes going on in language learning – the psychological, as you say, and the logical which we have explored. This dual approach perhaps mirrors what happens in enquiry. The problem was explored in studies into the growth of knowledge by, for example, Popper in Vienna in the 1920s, and where he was briefly a teacher, and so was able to observe the learning process. However, Popper's work on this is not well known, and even less well understood – but it links to the idea that knowledge is driven both by both psychological factors, and by logical factors. (Grunewald now emphasises ... )

*We require to separate those two learning strategies – the psychological and the logical – investigating them separately, before we can bring them together again. In a similar way, a student-doctor studies the different ways in which a human body functions – circulatory system, nervous system, glandular system and so on - before bringing those separate understandings together to a*

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<sup>12</sup> See Maclean, A.L., ((2018), *Radical TEFL*, 5, “Pedagogical implications for TEFL of work in Mathematics education deriving from work in schema theory”



general understanding or synthesis of the way in which the body functions, or malfunctions.

One value of distinguishing and separating the psychological from the logical aspects of learning is that, today, we can give our full attention to the logical aspects of the growth of knowledge, or as we have argued, to the logical aspects of learning.<sup>13</sup> We will have staked out our ground, and this also means that colleagues from educational psychology and cognitive science can work on the psychological aspects, without being distracted by logical aspects of enquiry – of learning. Later, someone can come along and bring those two approaches to a synthesis, but it is perhaps too early to do that work at the moment. Preliminary work is needed to better understand how scientific enquiry does, in fact work, and this is not always understood...

#### SEPARATING THE SOCIAL CONDITIONS FOR LANGUAGE LEARNING FROM A STUDY OF THE INDIVIDUAL'S PROCESS OF LEARNING

**(Professor Kuhl from the Social Sciences department)** You have not referred to social factors in language learning. Would you also say that these can be left on one side?

**(Grunewald)** For the purposes of our work in this presentation, yes, we can leave the social aspects of language learning on one side. There exist a large literature on this, and which we again have no quarrel with. In fact, the classroom work which Frau Klara has reported on assumes that learning to speak is a social, cooperative, enterprise. We regard the social aspect as a given.

The social factor addresses the question of *the conditions* for language learning to take place But the question we are addressing today is the separate question of *the process of learning by individuals – internal, cognitive aspects*, if you like. We see no contradictions between a social approach to understanding second language learning, or an approach which tries to understand what the student is doing with his input, and how he integrates that input into his existing understanding. Hitherto, those two approaches have been regarded as opposed, but we would maintain that they require to be understood as complementary.

**(Professor Kuhl)** Another question, please. Professor Grunewald, can I return to your hypothesis - that enquiry and learning follow a similar process involving the three core stages of, first, a problem, second, a knowledge claim, and third, some scrutiny. Your hypothesis about the three core stages of enquiry seems to me to itself require scrutiny. You see, in social studies, many studies do not begin from a problem, but from observational studies, diary studies, and so on.

**Grunewald)** Well, the three-stage description of how enquiry works comes from Dewey and Popper, and it is not mine. Their description of how enquiry actually works is simply based on surveys of successful enquiry which addresses and solves a research problem, or a human problem, as in education. In this way, Dewey and Popper are simply recording what seems to be the case about successful enquiry. They also point out that their understanding of how enquiry works allows for self-correcting scrutiny – an essential safeguard against ideology – and for Popper, successful enquiry tries to disconfirm, not to confirm. Good enquiry is critical, and probes rather than proposes. We believe that a similar critical attitude is found in successful learning.

**(Kuhl)** Well, assuming that Dewey and Popper are correct why should it be that enquiry requires to start from a problem? Might it not start with an hypothesis - with a knowledge claim?

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<sup>13</sup> “Logical” is the word used by Dewey, Popper and others, but a clearer word might be the “architecture” of enquiry, or of learning. The key distinction between logical (“architectural”) and psychological factors is expanded in my study of John Dewey's theory of enquiry (my 2016: Appendix A), Re-conceiving 'teacher research' with the help of John Dewey's theory of enquiry, *Radical TEFL*, 4, Free download at <http://radicaltefl.weebly.com>

**(Grunewald)** Enquiry seems to work in a 3-stage self-correcting loop of problem, knowledge claim, and scrutiny of that claim, and it may be that a problem is often the best entry point into that loop, allowing the enquiry which then follows to be kept under some control, and the enquirer is thus obliged to investigate and consider only that material which seems relevant to addressing the problem. This reduces the scope of the enquiry, and allows links to be more easily seen in that material. But an hypothesis can be a good entry point to start an enquiry loop, also...

**(Chair)** We must finish now. Frau Klara, has your work on the topic presented today changed the way you teach? How has it affected your pedagogical approach?

**(Klara)** First of all, I see that correction can help the students to do their own work of scrutiny. I correct mistakes more where I think it will help their enquiry process. Discrete and timely correction, I believe, can help them to work out for themselves where they are going wrong. Also, I link my correction to the next piece of work I give students – and often that means setting different work for different students. I also see my students' learning problems differently. I give more attention and respect to their ways of addressing their problems, for example, I now give my students more time and space to use those enquiry strategies which we explored today. I look for materials which give more opportunities for speaking – I write my own longer activities, because our course books do not give sufficient oral practice opportunities.

**(Chair)** It is 3.30, time to finish, and time for a nice cup of English tea and some English cake. Professor Grunewald and Frau Klara – thank you, you have offered us a fresh way to look at second language learning. The student as enquirer? I will certainly go away and think more about that idea, and how it may help to understand language learning.

**(Grunewald)** We thank you also, for your tolerant reception of our ideas. I will give out copies of my handout now (given immediately after the text, and this is followed by a summary of the above fictitious transcript).

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## **ABOUT THE AUTHOR**

I studied Physics, Chemistry and The History and Philosophy of Science, graduated in Philosophy, taught Mathematics in secondary schools in England and secondary EFL in Poland, and also worked with pre-service and in-service EFL teachers, giving many workshops for the British Council, especially in Belgium, as well as specialising in short course ESP teaching. I lived and taught in Poland for 20 years, and edited *The Polish Teacher Trainer* (1993-95). (AM)

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## PROFESSOR GRUNEWALD'S HANDOUT: LIST OF SIMILARITIES BETWEEN ENQUIRY AND LEARNING TO SPEAK

In both successful enquiry and in successful learning, a person seems to be looking for understanding and for order, in parallel with applying that understanding to address problems. At first sight, some aspects of successful learning seem to have common features with Dewey's understanding of how enquiry works, as follows: in each of them <sup>14</sup>

### FIRST STAGE OF ENQUIRY/LEARNING (Determination of the problem)

- Both enquirer and EFL learner **start from a context**, and from prior knowledge and provisional understanding about the problem, beginning from what is already (provisionally) considered as established; in the EFL learner's case he starts from an understanding **of language**, as learned when learning his first language;
- both learner and enquirer **start from a problem**, for example, a difficulty met in practice; or from a contradiction between two conflicting interpretations;
- for example, the provisional knowledge claim may contradict existing ones; or hits a contradiction in the sense that the claim to understanding or knowledge is **inconsistent with data obtained in experience** or in practice.
- When faced with fresh material, EFL learners (and enquirers) are normally *puzzled* at the beginning – they don't “get it”); the student and enquirer both start from a problem or **state of doubt** (the problem may simply be that he/she does not understand the new work); <sup>15</sup>
- both need to be clear about the problem to get started: but the problem may need to be developed and re-conceived, and this work can be done at any stage in the 3-stage self-correcting loop of enquiry (for Dewey, determining the problem is not a one-off event, but a process)

### SECOND STAGE (Process of setting up a provisional claim to understanding / knowledge)

- both may use the following strategies to arrive at provisional knowledge claims:
  - (a) working by analogy or comparison with what is already known (although in moving from a first to second language this is often a false trail);
  - (b) attempts at classification of what is known, in order to identify some provisional order in the form of regularities and rules; and
  - (c) “thought experiments”; resulting in ....

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<sup>14</sup> In the following sketch of (sic) some parallel stages in both enquiry and in learning, the logical and psychological aspects of learning and of enquiry have not been distinguished from each other, although for a fuller study each requires to be treated separately and then brought together.

<sup>15</sup> For Dewey “*reflective thinking (ie, effective learning) ... involves a state of doubt (and) ... an act of searching, hunting, enquiring to find material that will resolve the doubt, settle and dispose of the perplexity ... we metaphorically climb a tree, we try to find some standpoint (ie perspective) from which we may survey additional facts and, getting a more commanding view of the situation, decide how the facts stand related to one another ... we must be willing to protract doubt*” (Dewey 1933: 12, 14 & 16), quoted by John Mason and Johnson-Wilder (2004: 280/81), in the context of understanding that there are two routes to (mathematical learning: adaptive and pro-active routes, an idea which is found in Piaget)

- setting up a provisional hypotheses or judgement or belief; the judgements needing to fit into what is already known ... requiring:

### THIRD STAGE (Scrutiny)

- both carry out testing, critically and provisionally, trying out the hypothesis to see if it works in practice, and in accordance with available and relevant data. Additional data may introduce a contradiction, and so a fresh problem, and the problem and/or hypothesis may need to be reformulated, and the self-correcting enquiry loop is required;
- both look for confirming examples;
- both require to be open to disconfirmation of judgement, thereby trying not falling into the trap of confirmation bias; and
- both take account of additional information, seeing if it fits in with provisional conclusions; and trying out some ideas to see if they work or not, and to see if they 'fit in' with his existing understanding;
- ideally, both confirm their provisional understanding from data obtained (provisional confirmation stage in enquiry), or instead, the self-correcting loop comes into operation ...

### SELF-CORRECTING LOOP

In a secondary school, the same aspect of the language system is often returned to annually, again and again. Coming to understand, or extend understanding (and then to use) that aspect is a process, often lasting several years. The same loop of returning to a problem is observed in enquiry, for example in history, where evidence is revisited or fresh evidence unearthed, allowing a progressive development in understanding the problem. For example, in determining the laws governing planetary orbits, the problem was revisited numerous times, from antiquity to Kepler.

### AS A RESULT OF THE ABOVE PROCESS

Both successful enquirer and successful learner bring together previously unconnected understanding **into a synthesis** which connects those earlier fragments, resulting in a coherent, orderly, whole. The unsuccessful learner or enquirer, having fallen at one of the hurdles, does not reach this stage: and so, the work has of enquiry/learning has failed, or is only partially successful.

It seems that in both enquiry in an intellectual field, as well as in learning by an individual, in each case those learner-enquirers are constructing or re-constructing (or re-arranging) fresh maps. Such understanding – a synthesis - results in a more coherent whole, because relationships are made clear. This relates to Kant's idea that learning is a synthesis of prior understanding with new input.

The learner's problem, in my experience of both teaching and observing teaching, is often that he doesn't see how new input “fits in” with what he already grasps – he does not see the whole. It seems that in both enquiry and in learning, the project is to see the whole. If a language is understood as a system of relationships, then successful learning is about learning the relationship. But the same happens in intellectual fields – enquirers are trying to make links, to bring order out of what seems disconnected.

Grunewald / 'University of Vierkirchen'

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# Learning to speak EFL as a form of enquiry

## Summary of the article

At a fictitious university in the hills of Bavaria, in Germany, the Modern Languages Department is holding its annual seminar where speakers from other departments are invited. The afternoon session will be addressed by Professor Grunewald, from the Philosophy Department, and who has made a study of the growth of scientific knowledge – he is a Philosopher of Science. The Professor will make his presentation jointly with a research student, Klara, who is an English teacher in a local school, and who is interested in how English learners learn to speak. Klara and Grunewald have worked together in the following way – she has proposed a research problem and has collected insights and evidence from her classes. He has proposed a framework, starting from existing work on how learning and the growth of knowledge takes place.

The members of the Modern Languages Department are presented with a quite novel idea – although, as the Professor points out, the idea can be found in the work of John Dewey. Grunewald argues that *learning can be understood as a kind of enquiry*. He identifies some features in enquiry which are also present in language learning, so perhaps establishing parallels between the growth of 'science', and learning. Some parallel features which he identifies – but which in a short seminar he is unable to explore – are as follows: 1) starting from a problem; 2) forming conjectures or hypotheses; and 3) testing out, or scrutinising those conjectures to see if they work. This is followed, in both fields, the Professor claims, by 4) provisional confirmation, or disconfirmation of the conjecture. He says:

*“The interesting question for educators here is: How far are the enquirer and the learner doing similar work? If there are similarities, then insights obtained from understanding how enquiry works might be helpful for understanding how some learning takes place. ... Dewey actually writes that all knowledge involves experimentation, which implies that a learner is experimenting. “*

The research method which Klara and the Professor used in their investigations was to start from the learners' standpoint, *putting themselves in the learners' position* as they learned to speak English, and to try to understand the stages of their learning. Klara offers evidence from her own classes.

After the presentation, there is time for questions and discussion, as well as for objections to the thesis proposed. Professor Grunewald offers (he hopes) succinct and penetrating answers to questions and objections raised by Dr. Deidaghtich of the Education Department; from Dr. Syntax of the Linguistics Department; from Dr. Schmidt of the Psychology Department; and from Professor Kuhl of the Social Sciences Department. Klara describes how her research work, and resulting thinking, has altered her English teaching. It is time to stop for tea, but to give everyone even more to think about, the Professor distributes a handout with more similarities (he claims) between 'scientific' enquiry and learning to speak a second language. (Pages 19/20 immediately above)

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The full version of the article is given at:

<http://radicaltefl.weebly.com>

# PEDAGOGY AS HANDING OVER TO THE LEARNER

Alistair L. Maclean

What is teaching, specifically, teaching a class of teenagers to speak EFL? At one moment a teacher is acting as a manager, as she sets up a lesson, handing out books, and so on. She then becomes a pedagogue, giving examples of the language to be practised. Now she is encouraging, or correcting, or answering a question, or simply moving round the class. If the teacher is at one moment managing her classroom, and later in the lesson, creating learning opportunities, we probably require to study these two activities separately, and this article is a study of the pedagogical aspect of “teaching”. The words pedagogy and teaching are used here interchangeably.

Can pedagogy take place without teaching materials – it seems not. Then, should the materials be regarded as part of “teaching”? Is teaching like a craft? Is teaching an applied field, similar to medicine, where a teacher puts into practice what she has learned from source disciplines?

## 1. Problems in investigating pedagogy

We seem to lack an entry point for addressing such questions, and problems of enquiry methods are immediately raised. “Teaching” is a multi-faceted enterprise, difficult to describe or quantify, with many interacting and shifting variables. What would count as evidence for an investigation of pedagogy? What are we looking for and what are we looking at – what are the constituent variables of pedagogy? How would we identify what counts as variables, and as evidence? Are the variables interacting with each other (Scarth & Hammersley 1986), for example, does learning have a feedback effect on teaching, changing teaching, depending on the moment in the lesson?

Observing and recording teaching is also methodologically problematic because much teaching is at a mental level, as the teacher reflects on her next intervention. Attempts to record teaching may leave out what is most significant, and only capture surface aspects. A teacher who is being observed may teach in a different way from her everyday routine, perhaps anticipating and meeting observer expectations. Work was done thirty years ago on problems of researching pedagogy in mainstream education: on the difficulty of defining and pinning down variables; on the problems of variables interacting with each other; on the effect of an observer; and on the difficulty of separating teaching from learning. 16

Fortunately, an empirical approach is only one route to understanding, but is perhaps best suited to those fields which can be kept under control or which are constant – such as the motion of the

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<sup>16</sup> On methodological problems and pitfalls in researching the classroom, see mostly the work of Martyn Hammersley, (esp. his 1986a and 1986b, but also much else of his earlier work); also see Scarth and Hammersley (1986); and Nuthall (2004 & 2005). Within Applied Linguistics, some similar points are made in Chaudron, C. (1988 *Second Language Classrooms*); and also see Cohen, Andrew (1984), *Studying Second-Language Learning Strategies: How do we get the Information?* *Applied Linguistics* 5/2. Esp 101-105

planets. When it is difficult to see how to empirically and “objectively” investigate a question in a field, especially in the human sciences, two approaches can provide an alternative starting point – appeals to experience, and analysis.

If teaching is difficult to describe or record, then we can at least ask questions, refer to experience of teaching, and take our problems in developing theories of teaching as a starting point for further efforts at understanding. We can analyse the concept of teaching, and I will try here to *under-stand* teaching, try to get under the surface of “teaching”, in the context of my own teaching experience. Selecting one aspect from the many aspects of teaching, I will first probe the idea that pedagogy is about *problem solving*: that the teacher is identifying and addressing her problems, and at the same time identifying and addressing her learners' learning problems.

However, I will go on to suggest that a “problem-solving” conception of pedagogy is inadequate, and then explore the idea that pedagogy is about *handing over to the learner*. In the article which follows this one, I will explore the idea that, rather than problem solving, effective pedagogy is about anticipating and preventing learning problems. In the text “she” refers to the teacher and “he” refers to the student.

## 2. Is teaching problem solving?

A teacher starts from and works within the context of her problems, and of the problems of her students. She is restricted by constraints of all kinds: Lack of time, of resources; a large class meaning that she can give little time to individual students; a prescribed syllabus and course book, integrated with regular testing, with the pressure to follow a programme and get results for her students (and this according to criteria she herself has not chosen), which will limit her freedom to teach; as well as pressure from students. Teenagers are often conservative in their expectations from teachers – they often want work and 'rules' explained, pressurising teachers to use transmission-style teaching styles. <sup>17</sup>

Other problems will include students who fail to understand the work, students who are under-achieving and are bored and so are restless, students who are rejecting what is being proposed, students who have given up, students with problems of hearing or sight, or unwell, students who have missed the previous lesson and are lost, conflicts over homework, forgotten books, etc. In addition, there are the learning problems. In a small group, perhaps in a private language school, it is possible to deal with such problems, but in a larger state-school class, the teacher can easily be overwhelmed, and if she does not deal with the problems, very little learning will be achieved. <sup>18</sup>

**2.1 The problematic situation** John Dewey offered an analysis of the value of starting from problems in an enquiry, and we might keep his insights on this in mind. Dewey claims: <sup>19</sup>

- The relevant problems require to be “extracted” from the context of the *problematic-situation*: (in this enquiry, the relevant situation is the learning situation which the student finds himself in);

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<sup>17</sup> On constraints on secondary teaching see the important educationalist James Calderhead (University of Lancaster) (1984: ch.5) for an extensive discussion.

<sup>18</sup> See McIntyre D (2005:360) for a description of the secondary classroom. Also see McIntyre (2005:358) for an argument, also made in this essay, that for a teacher, practical knowledge is pedagogy.

<sup>19</sup> This work was done in the context of understanding problems as a starting point for enquiry. See his *Logic: theory of enquiry* (in the opening pages of ch. VI, 1938, 1984), University of Southern Illinois, ed. Boydston,



- Understanding the problematic situation is a *process*, during which embedded problems can be progressively understood and seen afresh.
- Within a “*problematic situation*” there are subsidiary problems embedded, and which require to be extracted, or ‘unpacked’: but one must stay close to the “problematic situation”;
- Understanding a problem is like a diagnosis: there is looking and probing – and especially, there is *questioning*; the enquirer's questioning will define the direction which the enquiry takes, as one line of diagnostic questioning leads to another.
- Dewey warns against *mis-taking* one's problem: “*To find out what the problem and problems are which a problematic situation presents to be inquired into, is to be well along in inquiry. To mis-take the problem involved is to cause subsequent inquiry to be irrelevant or to go astray ... The way in which the problem is conceived decides which specific suggestions are entertained, and which are dismissed; what data are selected and which are rejected*”. (1938: 112)

So, the starting point and centre of an enquiry, for Dewey, is the **problematic situation**. We need to keep our attention on the situation which the learner finds himself in, which is partly the classroom, but also his own, problematic, learning journey.

I have found that each of Dewey's insights here are relevant in regarding a large class as a problem situation. The “*problematic-situation*” in a lesson is multiple and in flux. Each learner will have his own. In a good lesson, where the teacher reacts to learner feedback, the situation will be dynamic, developing and changing as a lesson proceeds. Teachers are expected to plan their lessons, with clear hoped-for outcomes. However, invariably, and as a rule of thumb, I found, it was only possible to plan 15 minutes ahead, because after that time, the problematic situation would have changed, requiring different action from that originally planned.

In a typical lesson, students might not, for example, grasp the material presented, requiring a strategic pedagogic retreat. Feedback from learners determines how teaching, and a helpful lesson, develop. An interesting and challenging aspect of teaching large classes is that a teacher works at her limits, diagnosing and determining learning problems; seeing through surface problems to underlying ones; making decisions about materials; allocating individual work to students; as well as writing material on the board as required. This leaves aside classroom management issues such as dealing with a student who is trying to stop his “friends” from learning. A constant feature of a teacher's work is that she is determining and working from the changing problems in front of her.

### 3 Is pedagogy handing over to the learner?

However, there are two problems with an understanding of teaching-pedagogy as a problem-determining and problem-solving enterprise: first, it remains only a rather abstract analysis, and secondly, the analysis (so far) is inevitably focused on the teacher. An analysis, on its own, doesn't help us to help our clients – our students. An analysis of teaching naturally starts from the teacher's standpoint, while what is required in education is to start from the learner, and his problems.

My experience taught me that a teacher is only an instrument in learning – her role or function (together with her teaching materials) is as an intermediary between the learner and the teaching materials, in some way “drawing out” learning, as given in the original meaning of “to educate”, and argued for in Plato's *Meno*. For our problem is the learner and not the teacher. The teacher is helpful, I will argue, to the extent that she is able to help and persuade the student to take over the learning problem. I will argue that pedagogy may be, partly, about *handing over* learning problems to the learner. A parallel role for the teacher, I will argue, is that the teacher's role is to prevent

learning problems (in the next article in this *Radical TEFL* “*Pedagogy as anticipating and preventing learning problems*”).

Starting from the teacher's problems perhaps gives a good entry point to understanding pedagogy, but we need to return to two warnings made by Dewey, and given above: firstly, a problem needs to be progressively determined, or diagnosed: what seems to be the problem may only be on the surface of the real problem. Secondly, if we mis-take our problem, we will go astray, as the problem determines the direction of the enquiry which follows. Again and again in education, thinkers have come to a similar conclusion – that considerations about teaching lead us to the student's problems. We cannot understand pedagogy, nor develop a theory of pedagogy, until we have a better understanding of learning. To regard teaching as about the teacher is to “mis-take” our problem.

**3.1** If one examines problems in teaching we can helpfully classify them into learning problems, and problems of classroom management and of working with constraints. Learning problems are difficult to solve. For example, to take the neglected issue of correction, a student may be confused in using the tense system of English. The problem is easy to see, but difficult to solve, especially if the mistakes have become embedded in practice. Classroom management problems and constraints are easier to diagnose and address, and a teacher can learn to work within constraints such as examination requirements. A experienced teacher learns to solve problems of discipline, and so on. To an observer, everything may seem under control. However, the price often paid for a well-ordered classroom is that risks are not taken in learning, and work done may be at a controlled level, with rote learning. Students copy from the board, and this makes for an orderly lesson.

The challenge for those who advise EFL teachers is to help teachers create lessons where language is brought into use. In my experience, this is done through handing over to the learner the learning problem. Teachers often like to see themselves as “teachers”. But one cannot, alone, “teach” EFL.<sup>20</sup> The teacher requires good learning materials and practice materials. The topic belongs to an article on understanding learning - for example on setting up meaningful practice and on understanding the significance of practice<sup>21</sup>.

#### **4. Learning from other client-centred work**

To return to the teacher, if we regard teaching as an example of an enterprise where an advisor works with a client who has a problem, requiring guidance, how do similar enterprises set about their work? What can we learn from them?

In client- centred work such as a doctor (or therapist, or fitness instructor) we find a common feature related to that work: the therapist, for example, is presented with the client's problems but cannot solve them. The 'guide' can perhaps define them for the client (as in pointing out to a student a mistake), but it is the client's decision what to do next. The client may, passively, prefer to live with the problem, or may pro-actively take a decision to address the problem.

In this sense, activities and interventions by a teacher are, only indirectly, problem-solving work, but they allow the process of problem-solving, by the student, to begin. For example, concerning correction of “mistakes”, without a teacher's help and identification of a mistake, the student cannot even get started on addressing it. In this sense, client-centred activities such as teaching cannot directly address a problem, whereas a dentist or surgeon does directly address the problem – the

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<sup>20</sup> The German work for 'teacher' is *lehrer*, and 'to learn' is *lernen*, both with the same origin as the English '*learn*'.

<sup>21</sup> On practice (in learning different skills) see the work of K. Anders Ericsson.

client has the status of an object, and is quite passive.

An implication of the above distinction between practitioners who can only identify the problem and practitioners who are able to directly address the problem is that the former (teachers, doctors, therapists) require to understand the limits of what they can do for their client. An advisor who tries to do too much may prevent the client from doing the needed work, or may even confuse him and exacerbate the problem. The skill of an advisor such as a teacher may lie in being clear as to the limits of how much she can help, and how much she must *hand over to the student*. ...

To understand pedagogy, the work of teaching perhaps requires to be understood as a dialectic, a symbiosis or relationship, between learning and pedagogy-materials. This dialectic or interaction is very difficult to observe, as it largely invisible (and for this reason, more overt features of teaching may be given receive priority). An analogy is the interaction between the oceans and the atmosphere in environmental sciences, and the two are studied as influencing the other. But here, quantitative methods can be used, as variables such as temperature can be accurately measured. In teaching, everything is in flux.

## **5 Discussion: pedagogy and other practical fields as avoiding problems**

However, perhaps the above insights are flawed, because we have omitted to consider some prior questions. We have assumed that pedagogy lends itself to “theory” We have not asked what kind of knowledge pedagogy is. Further, although searching for a theory of pedagogy, the question *What is “theory”?* has not been addressed. There may be different kinds of theory, suitable to different kinds of knowledge. <sup>22</sup>

Leading from this, if pedagogy is a practical field, *a practice*, rather than a theoretical field (such as linguistics), then we should not be looking for theory at all, but rather, looking for principles which have worked in practice – we require pedagogical principles, rather than “theory”. For example, in carpentry, the principle “measure twice before cutting once” seem to *work*. More than this, carpentry principles are designed *to avoid problems*, and perhaps we should be looking for something similar. We have fallen into the trap which Dewey warned of, given above, “*To mis-take the problem involved is to cause subsequent inquiry to be irrelevant or to go astray ...*”. Our problem, in doing pedagogy, is perhaps not primarily to solve problems, but to avoid problems. To do this, a teacher needs guidelines and principles, which have been derived by master teachers from their own practice, and which have been found to be effective in producing good work.

So, a practical field perhaps does not require a “theory” in the sense that a “pure” field does, but rather, principles which it can implement on the ground – for example, “introduce one new difficulty at a time”; “what is introduced should be practised”; and, “constant;y check student understanding”. Practical fields, always practised in local situations, require as a priority local solutions rather than a deeper understanding of why the principle works, and which the practitioner can always explore later in her career. We can understand this idea by studying how other practical fields develop. Practical fields develop by trial and error, and by finding out, eliminating what doesn't work, and by applying, *what works*, and this is a pragmatic approach to both action and validation of that action. <sup>23</sup>

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<sup>22</sup> On the ambiguity if the word “theory” see Thomas, G (1997), *What’s the use of Theory?*, *Harvard Educational Review*, 67/1. See especially pp. 80-81; 84-88 & 96-101.

<sup>23</sup> This idea, is argued for in an article later in this issue, “*How practical fields develop, with implications for understanding the development of EFL teaching*”) [e-version only]

I can illustrate the idea that pedagogy may be less about problem solving and more about problem prevention with an example from dentistry. If I go to a dentist with an aching tooth, I regard the pain as my problem, and would like the problem removed. However, the pain may be a symptom of an infection, which the dentist will look for and diagnose, because the underlying problem for the dentist is not the aching tooth, but the danger that a possible infection in that tooth risks infecting adjoining teeth. The dentist is mostly interested in *avoiding* a more serious, underlying, problem, and he may remove the aching tooth not to remove the pain, but to prevent infection spreading.

Pedagogy too, with other practical fields, may be at a root level about anticipating and avoiding problems. A house builder is, superficially, building a house, but he builds the house in a way which anticipates and avoids future problems of fire, stability, damp and so on. A study of pedagogy which observes teaching, and tries to understand how teachers bring about learning, may be looking in the wrong place. Teaching may be, at a root level, about avoiding learning problems.

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To the Welsh National Library in Aberystwyth

#### **SOURCES AND REFERENCES**

My main sources were my students and my own teaching experience. A bibliography follows.

#### **NOTE**

Ideas which are introduced in this article are developed and explored further in other articles which are published in this *Radical TEFL*.

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<sup>24</sup> This idea is argued for in the following article in this issue, *Pedagogy as anticipating and preventing learning problems*.

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# TEACHING ACADEMIC WRITING:

## TWO CASE STUDIES OF PEDAGOGY AS ANTICIPATING AND PREVENTING PROBLEMS

Alistair L. Maclean

*“Pedagogical principles derive from practice, and are intended to  
anticipate and prevent problems”* (John Elliot)

**SUMMARY OF THE TEXT** This article describes how I taught report writing and academic writing to students of English as second language, with the main aim of preventing or reducing problems for both the writer and reader. Section 1 describes problems and strategic solutions to problems in report writing, including laboratory reports. Section 2 describes an approach to teaching structured writing in some detail. Section 3 describes how the approach described can also be used for academic writing. Section 4 lists advantages of the approach described for both the writer and reader, followed by an Appendix which summarises the approach used. The work described here is from my own experience, and does not draw from any theory of writing, except for the insight that whereas writing is often considered a problem of English, it is perhaps more about information control, and organisation of materials.<sup>25</sup>

### INTRODUCTION

For John Elliot, a founder of teacher research in the 1980s, an entry point to understanding pedagogy is that it is work which tries to anticipate and prevent problems. Prevention is better than cure, and fire prevention is to be preferred to fire-fighting. The same principle is found in medicine, and in management studies. If the teacher is, partly, a classroom manager, her work is to avoid problems – discipline problems, confusion in learning, and oral or written output which is difficult to understand.

This article describes some problems for writer and reader in structured writing, and is a report from my own teaching experience on how those problems can be avoided. Pedagogy is, I found, partly about looking ahead to what might go wrong, and intelligent pedagogy is partly work of dealing with those problems *before they occur*. This article is about avoiding problems in structured writing, but it could have been written on avoiding problems in learning to speak, to read and so on.

I explore and argue for that idea here, drawing from my own classroom teaching career, in the context of teaching writing for professional purposes. I will take my first example from my teaching of report writing, and the second and main example from teaching academic writing. One main

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<sup>25</sup> This article develops ideas introduced in my (2020), *Pedagogy as Handing Over to the learner*, and which is also published in this issue of *Radical TEFL*, 7. The quote above is found in Elliot, J (1987: pp. 151-52), *Educational Theory, Practical Philosophy and Action Research*, *British Journal of Educational Studies*, 25/2

problem in writing for academic purposes, for the reader, is that a student's work is both confused and difficult to follow. From an assessor's point of view further main problems in evaluating academic writing are plagiarism and other kinds of academic dishonesty.

I describe here an approach which I have used to try and prevent the problem of unclear academic writing, saving the student considerable time, and allowing him to present to the reader a clear, easy-to-read, text. The students to whom I taught writing all used English as second language, and in this article I have those students in mind. In the text “she” refers to the teacher, and “he” to the student. The stages of the approach to teaching writing which I describe now is summarised, in twelve points, in an Appendix at the end of this article.

## **SECTION 1.**

### **PROBLEMS IN WRITING REPORTS: First case study**

My earliest experience of teaching writing was with oil-industry engineers in Kuwait and Oman, who needed to write short, clear reports, which summarised a problem and proposed a solution for their line manager. Engineers generally do not enjoy writing, and do not want to spend much time doing it, and the problem our school had was to help them produce a clear and readable report, in a short period of time.

One approach to report writing is to produce a first draft, and then work from that, correcting and amending it, but with perhaps several redrafts required. A quicker and more efficient way, we found, was to aim to reduce time on redrafting, and to help those engineers to keep their material under control, and accurate, from the beginning, in the way given below.

Reports in the world of business, engineering and science follow a similar, easy-to-read structure: problem or context; what happened; analysis; and recommendations for action or further reflection. The approach which I report on here can also be used for writing laboratory reports, for example, in the final years of school. Before describing my approach to report writing, I will first list the problems which the approach takes account of, and tries to anticipate and avoid:

#### **Some main problems to prevent in report writing, with strategic solutions**

1. The final report is too long with irrelevant content, making it difficult for the reader to understand what the writer wants to say. In particular, it is not clear what the problem which the report is addressing, or conclusions or recommended action are not clear. As a solution, what the reader will appreciate is where the report is well structured, allowing it to be grasped in one reading. This can be achieved with short, simple unambiguous sentences, following in a logical order; and with no irrelevant material.
2. Because the English of the writer may be poor, sentences are sometimes unclear and difficult to read. Often, students are over-ambitious, introducing complex structures which they have not mastered, making the writing confusing for the reader. The strategic solution is to encourage the writing of preliminary notes using simple sentences. Connecting words can be added near the end of the writing process (below).
3. The report takes a long time to write, which the writer could better spend on his work or substantive studies. The solution is to show students a method which is quicker and more efficient in time use than the method which they might otherwise use (which is to simply start writing, and produce a draft which requires complete revision, with no guarantee that a second or subsequent draft is any better).

## **SECTION 2**

### **2.1 AVOIDING PROBLEMS FOR WRITER AND READER IN REPORT WRITING**

I now describe the approach which I taught my students, with the aim of anticipating and avoiding the above problems, this done by putting into practice the strategic solutions just outlined. Writing a short report is relatively straightforward compared to academic writing. A report (in engineering, for example) deals with specifics, but in academic writing the writer must handle concepts and offer considered evaluations of sources. However, the problems in organising and arranging material are similar, and the stages described here, I found, can also be used in academic writing.

#### **Establishing headings and sub-headings**

I found that the key to keeping the writing of a short report under control is to be clear about the structure, from the beginning. This allows headings and subheadings to be written, and the writing in each subheading should address the topic of the sub-heading. These headings require to be written in the order in which they will appear in the report, and they comprise the framework of the report. This is the approach to teaching academic writing used in many colleges in the USA. Using this approach, the writer does not attempt a first draft, but first writes appropriate headings and sub-headings. (I did not ask for an “outline”.)

#### **Writing notes in complete, accurate, short sentences**

In order to prevent grammatically inaccurate work, and which is time-consuming for the writer to correct (and when he no longer has a teacher, perhaps impossible for him to correct), I then asked the engineers to write their notes in short, grammatical sentences, without linking words. One note was written on one line of paper, to make those notes easy to work with later (below).

When sentences are short and specific, without subordinate clauses, and written in the simplest possible way, provided the writer has a command of basic spoken English, they are easy to write, are accurate, and so are easy to understand. In the business world, a good piece of writing is one which can be understood at a first reading. Using this system, my aim was to anticipate and avoid inaccurate (and so perhaps ambiguous) sentences, which are time-consuming to work on later. Long sentences will often contain more problems for the reader than short ones.

Engineers are practical, concrete people, and are used to dealing with specific micro-problems and micro-solutions. They saw what we were trying to do, and the next stage was to ask them to re-arrange their sentences (always under the already-determined appropriate sub-headings) in a logical and sequential order for ease of understanding by the reader (whose requirements from the writing they were asked always to keep in mind). This can be done by numbering the sentence-notes, so that text does not need to be crossed out and so on, making it difficult to re-work. (These stages are given again, in list form, at the end of this article in the Appendix).

#### **The sentences were now written out in the required order, under the appropriate heading.**

The students didn't enjoy doing this, but it provides them with a their almost-finished report (This was before word processing programmes, in the early 1980s, but students might now put their work on computer at this stage – but not earlier. The reason for avoiding a computer earlier is that hand-written work is normally less wordy, and so more concise, than work written directly onto a computer. Wordy, loquacious work is not appreciated in the world of work by managers who value their time, and wordy, prolix, work will need to be shortened, in any case, later.)

#### **Easy to add new ideas and content**

The writer now had a piece of writing of perhaps 20 or 30 sentences, in the appropriate order. At



this stage in the process, other sentences could still be added, inserted at the appropriate place for the logical order of the writing, as required. The sentences, being very short with no subordinate clauses, were mostly accurate and clear, easy to understand, and were now corrected for small errors in language, as necessary.

From now on in the process, the problem of writing is no longer one of English, but one of organisation and of relevance of material. Even people with problems in writing accurate English can now go on to present their thinking and their arguments, un-distracted by problems of English - except for adding lining words (below).

### **Shortening**

All drafts can benefit from shortening, as there will be certainly included in a draft superfluous words and sentences which do not assist in addressing the topics, or in answering the questions which the report is addressing. Our report-writing students engineers were asked to simply delete (without re-writing) what was not required. As a rule of thumb, 25% of the content of a piece of writing will turn out to be unneeded, and can be removed with a red pen. Often, a second shortening will result in more superfluous material struck out. (The clearer a writer is about *the question* he is addressing at each stage of the draft, we found, the more economic and clearer his writing will be.)

### **Linking up sentences**

The final stage was then to add connecting and linking words to their sentences, so combining sentences into longer ones, but without altering the already-established order or the sentences. At the stage of writing linking words, he is given a short list of the most simple words to use, such as : *first, next, then, and, but, so*. This made the work easier to read, and apart from a final writing out, the report was now completed.

So, rather than optimistically plunging into a first draft, as inexperienced writers invariably do, and then needing to re-write and again rewrite, our engineer-students, logical and concrete people, followed a logical and concrete process, which took little time compared to that required when a piece of writing requires to be redrafted or reconstructed.

If this process works for a short report, it can also work for long report, provided that the headings and sub-headings are known. The engineers often had a problem in selecting headings, and we helped by suggesting that, in a piece of of writing done for a work reason, each heading asks a question (which the text addresses), and that the heading can be written in the form of a question. The headings can be removed at the end, as the writing will have its structure in place. Examples of headings (in the form of questions, and which are not included in the final version) report might be:

- Why am I writing this report to my supervisor? (One sentence)
- What is the problem I am addressing? (One sentence)
- What is my proposed solution?
- What is required, in general terms, to implement the solution?
- What are the negative aspects of the solution?
- What are the costs in time?
- What other resources are required: man hours, outside help?
- What is the time scale for implementing the solution?
- How can the problem be avoided in the future?
- Summary and conclusion: What action have I proposed?
- What does my line manager need to have or to know in order to go ahead with my proposal?

- Appendix: A drawing or information expanding on one of the above (eg, costs, outside help)

## 2.2 REFLECTION AND DISCUSSION

The thinking behind this approach is that each heading leads to the next, resulting in a clear piece of writing; and so it avoids a situation where a writer has produced a draft of ideas and proposals, but mixed up, full of mistakes, difficult to follow by the reader, and with sentences which may be unclear (and this generally because they are too long and too ambitious).

This approach to writing assumes a basic, accurate level of spoken English (in subject-verb-object form), and is an exercise not in language construction, but in *information control*. It is designed to avoid the problems often met in writing, and to prevent the situation where a lot of time has been spent on a report, but it is both inaccurate and unclear. The student is encouraged not to focus on his English, but on organisation of material.

The students who had most problems were those students who wanted to write long sentences, and complicated English, and in the end they took much longer to write a short, simple report. Students often think that good writing is expressive and eloquent, but this is not what managers require in reports. Managers do not want to read an example of English literature. Further, in the international work world, writing done for work reasons will often be read by another non-native English speaker, making it even more relevant to keep the writing as simple and clear as possible. The important thing in the work world is to save time in both writing and reading the report, avoiding ambiguity in the message.

Always with the reader in mind, we also encouraged our engineer students to number the stages of their report, and to use bullet points when introducing a series of facts or perspectives, as this helps the reader, and is another way of avoiding long and possibly ambiguous sentences. Managers are busy people, and if a manager has to get back to the writer with requests for clarification, this counts as a poor report, as time is lost.

It can be emphasised that, while the main aim of the work of our school was to help students to easily produce clear writing, the over-riding pedagogic concern in trying to achieve this result was to *avoid situations where students ran into difficulties and confusion in the writing process*. Each stage was designed to be manageable, with the writing produced containing a minimum number of problems in English or in meaning which would need to be dealt with later in the process.

We tried to de-mystify the role of English, and to emphasise the importance of a clear structure, and of clear information control in the finished report. A reader does not want to waste time deciphering the text, nor is he assessing a student on the number of English structures he can use. We understood report writing not as an exercise in applying language theory, but as of producing a readable and clear final version – a problem of information control and organisation. In teaching academic writing as part of a university preparation course, I made use of what I learned from this experience, and I describe this now.

## SECTION 3:

### 3.1 ACADEMIC WRITING: AVOIDING PROBLEMS FOR WRITER AND READER

I have described at some length my approach to teaching report writing, as a similar approach can be used to teach academic writing. Problems which the reader-assessor and writer have are in some respects different, however, but interestingly, the solutions to avoiding these problems, I found, are similar. I now present those problems, with strategic solutions which seemed to work. My experience of teaching academic writing was with university students in different contexts

preparing for university study. Some main problems to anticipate and prevent in academic writing are:

1. **Plagiarism and issues of academic honesty**, meaning that the research and thought presented in an essay or dissertation are not the student's own. The solution is that the student retains drafts of his work (below), showing its evolution;
2. **Irrelevant material**, which both distracts from main ideas, and which does not address the research question. The solution lies in provision made in the writing process for editing (below);
3. The essay contains **opinions, generalisations and other digressions** which are not substantiated, nor are they derived from source material or other evidence, nor from an argument based on evidence. The solution is to encourage the student to redraft in a way in which he becomes his own critic, trying to identify, and then striking out, such material. The approach proposed allows such redrafting, and which when combined with editing (as described above) makes it fairly to easy to remove unhelpful material;
4. **Poorly structure and organised**, making the content at worst difficult to decipher and so evaluate, and at best, requiring more time from the reader;
5. **The writer, especially if educated in sciences, is not used to essay writing**. As a result, firstly, the writer will spend a long time on the mechanics of writing, which might have been used in research or reflection. Secondly, when the essay is evaluated, he may receive a poor mark because of the bad impression given by his writing, compared to a student who has been taught how to write well. The approach now presented, therefore, tries to teach a way of writing which avoids these two problems.
6. **Students neglect to keep a record of sources**. In the approach proposed, sources are noted at the same time as note are made .

With these problems (and strategic solutions) in mind, and with the aim of trying to avoid them, the same strategy can be used in teaching academic writing as for report writing, and given above, although there are two important differences between writing for work reasons and in writing for academic purposes.

1. In academic writing, students may be marked less for the information and arguments they present, and more for the way in which they control and structure their material. This is required (and is an assessment criterion in marking work produced as course work) in the International Baccalaureate Diploma Programme (IBDP), and which I prepared Polish students to write for. In particular, academic writing insists on clear separation of presentation of material, and the student's evaluation or discussion of the material. Value requires to be separated from fact.
2. Academic work is longer, and my Polish students on the IBDP were required to write all of their (externally-assessed) courses assignments in English, up to 3,000 words long. The length in itself was not a insuperable problem, as the work can, and should, be sub-divided into sections, each addressing a different aspect of the chosen topic

Both of these requirements mean that it is even more important for students to be clear about their headings and sub-headings, and about the structure of their writing. Students do not generally enjoy planning, and prefer to launch into a first draft. However, the discipline of drafting a structure means that it is easier to see where note-material should be placed, reducing time spent in cut-and-paste redrafting.

### **3.2 Second case study: Teaching academic writing as part of university preparation**

My school had just begun to teach to the International Baccalaureate [Bilingual] Diploma Programme (IBDP), but our students had not been taught writing in a systematic way at school, so I

gave a weekly class to help those Polish students write their IBDP assignments in English.<sup>26</sup> I hoped that it would also help prepare them for their academic writing in a British university, to which many wanted to apply. Students found it hard work to follow the process outlined above for report writing, as it involves thought and analysis - it is much easier to launch into draft, and to just start writing. However, this rarely gives structured work, but which is required to earn a good mark.

The IBDP marks course assignments on structure, and on organisation of ideas, and mistakes in English which do not impede meaning are not penalised. I was able to persuade my students that their task was not to show their expressive English, but to organise their material and their thinking about the material. They probably did not always use my approach when writing their assignments, but they may have learned how to organise material, to appreciate the importance of headings to give as structure to their work, and how to shorten or add to a draft. . They all managed – in the end – to write a 3,000 word, externally assessed, “Extended Essay”. (This essay must not be longer than 3,000 words, obliging students to learn how to delete extraneous content.)

An advantage of the approach which I have described is that, as students make their notes, they can at the same time keep a record of a source, if that is relevant, and attach a bibliographic citation. This means that when the final draft is complete, footnotes and references are also completed, meaning that the student does not then have start looking again at his sources to find specific reference. This saves a tremendous amount of time. Not all students who write for the IBDP will go on to university, and use this approach. But they will have learned how to produce a structured piece of writing, even in their first language. The idea of writing out notes grammatically and clearly, in sentence form, in the form in which they will appear in the final text, also saves a lot of correcting work later, and which is not work from which a student can really learn anything concerning the topic he is writing about.

### **3.3 A pedagogic strategy to avoid problems**

In both of the cases which I have described (report writing and academic writing), the key pedagogic concern was to avoid and prevent a situation where students ran into major difficulties, finding themselves faced with a poorly-organised and (for the reader) confusing draft, which they could not see how to improve.

The approach used *did not* draw on theory on teaching writing which is often presented to students, nor on social or cultural theory. It starts from the idea than a good piece of professional writing is clear, because it is well organised and structured, allowing it be read and assessed quickly for a decision, or for a mark.

## **SECTION 4**

### **ADVANTAGES FOR WRITER AND READER OF THE APPROACH OUTLINED HERE**

In my experience, if the approach I have just reported on for teaching academic writing is followed, there are very few writing errors for the teacher and student to deal with. If a student can speak short, simple English sentences, he can normally write them. Mistakes in grammar (and which may result in the text being misunderstood) generally arise because the student is too ambitious with his English – he may have followed a course in “creative writing”, from which he has mistakenly concluded that good English is complicated and ambitious – but he will make mistakes if he brings that approach into writing for professional purposes, and his writing will be unclear.

At the stage in the process where the student has written out his notes in short, simple sentences,

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<sup>26</sup> First Lyceum , Gliwice (Silesia), Ulice Zimowa, Poland (2009-2011),

mistakes can then be identified - and the simpler the English used, the fewer mistakes there will be. As with other professions, a temptation in teaching is to mystify. Our work, I have found, is rather to simplify the learning task, anticipating student problems, and to avoid introducing work which may confuse and puzzle the learner. But teachers (and their managers, as well as students themselves) often think that the teacher is not doing her job if she does not introduce new difficulties in each lesson. The teacher's work, I found, is to reduce the difficulties and complications which can trip up students; to persuade the learner that their work is foundation work; and to avoid material which can be misconstrued, or can be distracting, and so cause problems for the reader.

The same strategy as I have described in this article, for teaching writing, can be used in teaching speaking. My learners wanted to speak and write without mistakes, and the best way to achieve this is to prevent them occurring in the first place, but this cannot be explored here. I now summarise the advantages of the approach proposed to both writer, and reader/assessor:

#### **4.1 Advantages for the writer**

1. The approach described here means that it is easier to get started. From the moment the student starts reading and researching the essay - taking notes and keeping a record of sources - the essay is already under way, and that material can be built on;
2. Ideas and material from reading are preserved in notes. There is no need to use time in returning to reading materials;
3. A bibliography can be started from the beginning, saving a lot of time later;
4. Rather than redrafting through extensive cut-and paste work, the essay evolves through drafts which move easily into each other
5. At all stages in the process, the student can see where he is, rather than getting lost, confused and discouraged by a draft which he does not see how to improve.
6. At any stage in the writing, relevant material and ideas can be added, and irrelevant ones can be more easily identified, and struck out. In this way, the essay can evolve thoughtfully, with each draft a clearer piece of work than the one it replaced;
7. Rather than focusing on the writing, and problems of English, the student can focus on his sources and his thinking. In the approach given – provided notes are written in simple accurate sentences - the English will look after itself.
8. As a result of this, leading to an essay which is clear and concise, and where the student's thinking has been well recorded, not only is the essay a good one, but the writing of the essay has encouraged thinking and reflection.
9. Time given to the essay has not been given to problems of writing, but on problems raised by the research question;
10. Since assessors are often looking for good organisation and clear arguments based on sources or argument, and since the approach proposed allows this, the student will get a better mark.

#### **4.2 Advantages for the reader and assessor, allowing her to award a good mark**

1. **Plagiarism issues** A record of the evolution of the writing can be kept, with notes, headings, and re-draftings. This almost eliminates the risk of plagiarism, or of a third party writing the essay;
2. **Thoughtful** Because the work has gone through several stages, it is likely that more thought has been given than where the essay is written in a one-off spurt.
3. **Reading, and reflection on reading, encouraged** At the note-taking stage, the student will hopefully do more reading, and will reflect more on the material

which has been used in making notes, because the the process encourages students to be self-critical, identifying irrelevant content work, and striking it out.

4. **A concise final version, reflecting the student's own work** Because of the work done in both selecting materials and in then rejecting material which does not help to address the research question, the final version is likely to be concise. Since the text began its life as notes from sources, there is less temptation for the student to pad out the essay with his opinions; or by summarising what other have said on the topic, and claiming this as his own work.
5. **Well-organised / 1** The essay is likely to be better organised and constructed, allowing an argument to be followed. As a corollary, the lack of an argument, or thought, of or development in the essay can be more easily seen. It is hopefully a more rigorous and well-thought out piece of writing.
6. **Well-organised / 2** The essay will clearly separate factual material from evaluation of that material.
7. **Easier to assess** Since the the essay is well-organised, it can be easily and quickly read and assessed. The difference between a student with something to say and one who finds it more difficult to do his own thinking will be easier to identify.
8. **Academic honesty:** The above approach encourages an honest approach to writing, as the approach is transparent; it starts from identified sources, and allows an argument to be presented.

I would emphasise a point here which is often not considered: Many students have been taught how to write a structured essay at school, and so are at an advantage over their peers who have not benefited from good teaching in this respect. Science students are often not taught how to structure a long essay. The risk then is that the good or original thinker, unable to put his thinking on paper, is penalised. This was my own situation: I had studied sciences but transferred to philosophy, and was at a disadvantage because I had never before produced long essays. The way of writing which I have outlined, if taught on a university pre-session course, gives a more level playing field, and means that the original student is able to better communicate his thinking.

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## **APPENDIX: SUMMARY OF THE APPROACH AND WRITING STAGES**

In the approach I outlined above, the students follow the following sequential stages:

1. Know who the reader is, and what the reader wants and needs; and all academic honesty requirements by the examining institution are kept in mind from the beginning;
2. to be clear about the problem or topic they are addressing;
3. write out, in the order in which they will appear, headings or subheadings
4. to help them do this, those headings can be written in the form of questions. They remain in the draft, but can be removed at the final version
5. meanwhile, they write out notes, at random, in complete, accurate, simple short sentences, with no subordinate clauses
6. notes are checked for errors
7. notes are now written again, arranged in the order in which they will appear in the text
8. notes and words which are not required are struck out (normally about 25% of the text). The text is now complete, apart from writing out.
9. a draft is typed out, with notes under the appropriate subheadings. No amendments to

- the notes are made (except for any further errors detected)
10. simple connecting words are introduced, to link sentences, with the only purpose of making the text clear to the reader
  11. The text is now complete. Headings can be struck out, and the text written out. Paragraphs follow the headings, with one idea for each paragraph. An appendix as required can be added.
  12. A word processing programme can be used from step 6, but preferably not earlier. Notes written in longhand are normally more economic, as more effort is required .

In my own writing, I usually use a similar method to that which I have described.<sup>27</sup> I redraft an initial text dozens of times, re-ordering, shortening and adding. It is important for me to have headings and subheadings, as these supply the questions to be addressed. When working from written sources I write out notes in individual sentences, which I then type up, and these are fairly easily integrated into an existing draft. I write out almost all my reflection and analysis in longhand, in ready-to-insert paragraphs (sometimes after waking and often in a pub at the end of a walk in the Wye Valley), and then type these paragraphs into an existing draft. Walking, and sleep, helps thought.

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## **SOURCES AND ACKNOWLEDGEMENTS**

My sources are the classes and students to whom I taught writing. There are no written sources for this article, as the work described is based on experience. I was introduced to the approach to writing described here by Mike Doherty and his school, 'Professional Communication Services', where I taught report writing in Oman and Kuwait in the 1980s. Mike's approach to teaching professionals started from their needs and their problems, and not from theories of language or learning. I would also like to acknowledge what I learned from teaching on the International Baccalaureate Diploma Programme (2009-11), especially from their guidelines and Assessment Criteria for writing the Extended Essay, other assessed written assignments, and laboratory reports.

## **ABOUT THE AUTHOR**

I studied Physics, Chemistry and The History and Philosophy of Science, graduated in Philosophy, taught Mathematics in secondary schools in England and secondary EFL in Poland, and also worked with pre-service and in-service EFL teachers, giving many workshops for the British Council, especially in Belgium, as well as specialising in short course ESP teaching. I lived and taught in Poland for 20 years, and edited *The Polish Teacher Trainer* (1993-95) and *Radical TEFL* (2014-2020). I taught *Theory of Knowledge (TOK)* for the International Baccalaureate (IB) Diploma, in Poland (2009-2011).

I would be interested in teaching academic writing to pre-sessional university students. Please contact me at [alistair.maclean@outlook.com](mailto:alistair.maclean@outlook.com)

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***Radical TEFL 7, September 2019***

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<sup>27</sup> Umberto Eco has written a useful book on thesis writing, although I have not drawn from his ideas.

# HOW PRACTICAL FIELDS DEVELOP, WITH IMPLICATIONS FOR UNDERSTANDING THE DEVELOPMENT OF EFL TEACHING

Alistair L. Maclean

A summary of this text is given at the end, after Dr. Eisenstadt's sources. Characters are fictitious. The format of a seminar transcript allows a thesis to be presented, with clear and short questions, objections and contributions from others, and for replies.

## INTRODUCTION

The fictitious University of Vierkirchen, in Bavaria, emphasises a multi-disciplinary approach. The university's Departments and lecturers are expected to be open to insights from other fields, and the university's funders stipulate that work and research stays close to problems met in applying theory to practical problems. Today, the Department of Modern Language Teaching and Learning is holding its annual seminar, to which guest speakers are always invited.

**(Chair of the Department)** Dear colleagues and guests, we welcome as our speaker this morning Dr. Eisenstadt from the History Department. Dr. Eisenstadt's most recent book is on the history and development of technologies in eighteenth-century Europe. I am not sure how the history of technologies relates to language teaching, but we look forward to learning from you, Dr. Eisenstadt. We will stop for coffee and English biscuits at exactly 10.30.

## (1) HOW DO PRACTICAL FIELDS GROW AND DEVELOP?

**(Dr. Eisenstadt)** Good morning, colleagues and guests. I will argue this morning that there are common, general features, present in the history and development of practical fields – in the development of crafts and technologies. I hope that this might be relevant to the second language learning and teaching department, because if there are indeed common features in the historical and continuing development of practical fields, and if at the same time language teaching is a practical field rather than an academic discipline, then there may be lessons to be learned.

Now, a study of the ways in which practical or technical fields grow and learn is an empirical study. From about 1750 to 1900, numerous sources are available in the form of, for example, patent applications, drawings and correspondence, these allowing historians to report on and penetrate to what happens as individual practical fields learn and develop. I will take three examples – the development of the steam engine by the Scot James Watt; the development of dyeing and bleaching; and the development of the manufacture of ceramics. In each of these fields we will find common features in how those fields grew their knowledge and expertise.

The engine, and in particular the steam engine, makes a good case study of the growth of a field, where there has been continuous development and improvements since about 1700, through the time of the Industrial Revolution, through the development of the diesel, petrol and jet engines. Sometimes progress, in the form of greater efficiency, came from scientific input, but mostly, I will, argue, progress came from practical 'tinkering', or trial and error, in workshops.

We will look at the Scot James Watt, who made huge improvements to existing steam engines.



James Watt was a practical man, an instrument maker and empirical chemist, and in about 1770 there was a need to improve the efficiency of existing steam engines. Working on this problem, he also became the leading, hands-on, mechanical engineer of his time. When Watt took up the problem of improving the heat efficiency of the steam engine, there was no real scientific theory about heat engines. They worked, and that was sufficient. Those existing engines were used for pumping water out of tin mines which would otherwise be flooded and unusable, but they used huge quantities of coal, which was expensive to transport. Watt had a friendship with the academic chemist Joseph Black in Glasgow, who at that time was researching the physics of heat. Black was among the first to understand that steam, when it condensed, took heat from its surroundings, and Watt understood, from this new concept, of 'latent heat', that this supplied a partial explanation for the inefficiency in fuel consumption of existing steam engines.

We can read in correspondence between Black and Watt how both men experimented to understand and quantify latent heat, and in this way Watt and Black were conventional scientific experimenters, controlling their variables and analysing their data. By understanding the significance of latent heat – that the heat in the steam was lost at each cycle of the engine - Watt was able to use this insight to understand the thermal inefficiency of the steam engine, and so to redesign the steam engine, and to get more power from the engine for less coal. This is the way that science can be helpful. A new concept, latent heat, expressed as a propositional knowledge claim, was used to address a practical problem which until then, had been held back, because it was lacking that key concept.

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So, an understanding of the concept of latent heat allowed Watt to understand better a key and relevant underlying principle of heat efficiency, and from this to see design solutions for the fuel-inefficiency of the steam engine. At the same time, to solve his *practical* and mechanical problems, he carried out informal trial-and-error experiments, and learned from failures. For example, the technology did not exist to accurately manufacture cylinders, meaning that heat was lost in the inefficient action of the engine. There were problems of vibration, which were again solved by practical trial and error, in the workshop. When the diesel engine was developed a hundred years later, the basic science was understood at an early stage, but it took decades of tinkering and trial-and-error for the inventor of the engine, the German engineer Diesel, to get the engine to actually work in practice.

I would like to draw your attention to a very interesting feature of the work I have just described: we observe that two kinds of knowledge, *deriving from two kinds of experiment* were developed in parallel. The one kind of experiment or enquiry was formal, under laboratory conditions, controlling variables. The other was hands-on, done in workshops, and which was a kind of testing out, or trialling. The first kind wanted to make general claims to knowledge. The second was *only interested in solving practical problems*.

We see that the two approaches to his enquiries complemented each other. The significance of James Watt's work, and Diesel's, is that they took advantage of a new concept from heat physics, and integrated it with their own practical 'experimenting', to develop a working engine. Watt re-designed the steam engine by drawing on helpful propositional knowledge, this *integrated* with his own, engineer's, practical approach to problem solving.

**(Chair)** How did Watt apply the concept of latent heat to the design of the steam engine, and at the same time address the practical problems in doing this? We might learn something here for linking theory and practice in language-learning situations.

**(Dr. Eisenstadt)** The solution was in principle simple – first to allow the steam to cool in a separate condenser, so not taking heat from the engine as it cooled at each stroke; and secondly, to put a steam jacket around the cylinder, to preserve its heat. Watt records that, when he had understood that steam takes heat (and energy) from the environment as it cools ('latent heat'), he conceived this solution “*all at once in a few hours*”. Remember, the concept of latent heat (discovered in the 1760s) was not available in earlier steam engine design. If you are interested in steam engines, next time you pass through London, visit the London Science Museum (South Kensington). To see working, industrial-use, steam engines visit the Manchester Museum of Science and Industry (MOSI, in Salford).

But, the main point in my paper today (and Dr. Eisenstadt emphasises this) is that *while the theory was straightforward, however, to put that theory into practice - in the ongoing design of the engine - was extremely complex in a practical sense* -overcoming problems of vibration, of water leakage, of connecting rods breaking, and so on. Theory does not greatly help to solve those kinds of problems. They were, eventually, solved by trial and error, by *informal experimenting*, by trying out, by problem solving through “trialling”. Watt's skill as a mechanical engineer was to solve those hands-on problems, and you really have to see a working steam engine, with the connecting rods and pistons exposed, in order to appreciate the practical achievement of getting everything to work together. Theory is often very simple compared to the problems of implementing it. In engineering, there can be a large gap between theory and practice.

**(Dr. Deidaghtich from the Education Department)** In language teaching, too. It is one thing to start from a theory, but quite another thing to try to apply it, taking into account everything that happens in a fast-moving classroom.

**(Dr. Eisenstadt)** Yes. Throughout the history of practical fields, problems were solved without theory, although later theory may help practitioners to better understand their work. I will explore that point a little later in my presentation. The interesting point I want to draw your attention to, just now, is that there are two kinds of experimenting available to us ... let me expand ...

Now, the development of both the petrol and the diesel engine, after the steam engine also offers case studies of how a combination of the two kinds of experimenting and the two kind of knowledge, as well as long periods of failures and rethinking are features of how practical knowledge grows. Those engineers repeatedly returned to their problems – but they used this as an opportunity to re-conceive those problems, to see them freshly.

The case of Watt drawing on a fresh concept from heat physics - latent heat - and then using it to solve a practical problem is only one possible example of a technology developing in this way during the period 1750-1900. During that time, other well-established technologies were transformed by developments in understanding underlying theoretical insights, thanks to work in science. It is interesting to note, in other examples which I now refer to, how practical 'experimenting' and insight from scientific work complement each other. I conclude from this historical evidence that the growth of helpful practical knowledge requires a combination of the two strategies.

So, let's look at developments in the technology of dyeing and bleaching fabrics. We find the same underlying combination of hands-on trial and error, combined with input from science. Dyeing and bleaching had been carried out for centuries before 1750, but the underlying theory had not been known, in fact, at about 1750, incorrect mechanical theories were used to explain the results. In that earlier period the conditions for success had been developed by a system of trial and error, that is, by informal, hands-on, experimenting. Then, from around 1750, relevant and helpful chemical

theory developed, partly through industrialist-entrepreneurs who understood chemistry, observing closely the practical process, and when the theory was confirmed, it led to better results. By 1900, the processes remained substantially similar but more efficient, thanks to theory derived from chemistry. In other words, the traditional, craftsmen, dyers has been correct in their approach, but they had lacked a theory to explain its success.

What can be learned from this? We see, in this example, in the history of dyeing and bleaching fabrics, that for a period informal or trial-and-error experimentation moved the field forward, establishing the conditions for success, and then when a scientific theory became available, these conditions could be built on. But a condition for this to happen was that the chemists, the theory-people, first closely observed what happened on the ground. The academics learned from practice!

Progress in dyeing and bleaching is an example of artisans first obtaining results without theory, but then once a theory was available, problems and inefficiencies in the process could be addressed. The same features are present in the development of the manufacture of alkalis, sulphuric acid, and so on, where the chemistry was understood after results, and where informal experimentation had for a long time resulted in good but inefficient success. So we see that, in the underlying features, this mirrors the development of the steam engine. A similar combination of the two kinds of experimenting, each contributing in different ways to the solution of a problem, can be found in other processes, for example, in the manufacture development of ceramics, where there was early success due to trial and error, and this consolidated by understanding of the principles.

From the examples given, there seem to be, broadly, two complementary ways of advancing a practical field: Firstly, by hands-on, workshop-grounded experimentation, without an understanding of underlying processes, that is, by trial and error, by attempting to establish the conditions for success, for example, in a workshop working on problems of vibration, and, secondly, by formal scientific enquiry, that is, by more formal experimentation, as in a chemistry laboratory, where variables can be controlled, leading to an eventual theory which claims to explain success, and which can be 'applied'. I will be happy to answer questions.

**(Dr. Deidaghtich from the Education Department)** What you say is very interesting. If pedagogy is also a practical field – a “craft” perhaps – then it might be that if we probe under the surface of its development, we might find the same, complementary and underlying processes at work, and which drive it forward? Theory building on practice, but each working in its own way?.

**(Dr. Eisenstadt)** Well, I am not an historian of pedagogy, but your observation might be worth following up. But it might be important first to clarify and understand the relationship between pedagogy and the fields which influence and inform it.

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## **(2) THE RELATIONSHIP BETWEEN THEORY AND PRACTICAL FIELDS**

**(Chair)** The question of how pedagogy and its source disciplines work together certainly requires more work. In that context, might we explore for a moment the relationship between theoretical and practical fields? What can be said, Dr. Eisenstadt, as a generalisation, about the way in which practical fields relate to academic fields? From what you have said it is not a straightforward story of a practical field drawing from a source discipline? You suggested that technologies can develop quite independently of academic input, perhaps for long periods of time, using a process of trial and error, that is, of simply learning from their experience and from their mistakes?

**(Dr. Eisenstadt)** Yes. Our evidence shows this. Historically, practical fields developed

without help or input from academic fields. We can call those fields 'crafts'. They were often extremely conservative and slow to change, but they produced results, as in metallurgy, or building construction. Then, a given craft would make use of relevant academic knowledge, and develop into a technology. The human factor would start to be lost, and the field started to rely on science, and on mathematics. . A first example of this process was navigation, where the magnetic compass made navigation more reliable.

We saw, however, that progress can be made without any input or understanding, at all, supplied by science or theory, in the examples I gave of the steam engine before Watt, of dyeing and bleaching up to 1750, and of the manufacture of ceramics up to about the same time. But the growth of understanding in practical fields and technologies occurs most efficiently when propositional knowledge (in the form of understanding supplied by formal research) is combined with developmental work through practical, hands-on, messy, experimenting. When the two kinds of knowledge work together, great advances can be made.

**(Professor Grunewald from the Philosophy Department)** That is very interesting. My own special field of study is the growth of knowledge in science. Can we look at the way in which experimenting is done in science, compared to technology? You suggest that, like the natural sciences, practitioners experiment, but in a more informal way, focusing on results and solutions, rather than understanding? A pragmatic approach to their problems?

And, concerning that relationship, the cooperation, between science and practical fields, does an applied field, normally, draw from a more theoretical field, or source discipline? Is that how an applied field learns and grows?

**(Dr. Eisenstadt)** No – the historical evidence shows that this is not what happens. Let me read to you the conclusion which the great student of the History of Technology Charles Singer came to. Singer wrote, and I will emphasise the key phrases:

*“At the close of the Middle Ages ...the craftsman . . . . knew little or nothing beyond trade methods and processes which he followed because they had been handed down to him and **they brought the results he sought**; he was altogether innocent of theories to explain his actions, (although) from the time of Francis Bacon, Galileo, and Descartes there have always been (people) in Europe believing that science must ultimately guide the operations of the technician... Despite this, . . . . until long after the close of the seventeenth century, industrial progress depended overwhelmingly on craft invention, rather than on the fruits of systematic scientific research ... Some few techniques . . . . were directly modified by the application of scientific ideas, but ... many other **premature** attempts to rationalize and improve craft methods **failed dismally**”<sup>29</sup>*

That is, Singer concludes, practical fields are capable of finding their own way, and an intervention from a source discipline which claimed to inform a practical field was often more unhelpful - with “dismal” results! - than helpful.

**(Dr. Deidaglich)** Concerning the relationship between language teaching and applied linguistics, a lesson might be drawn? **30**

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<sup>29</sup> Singer 1957 Vol. 3: Preface, my emphasis). Singer was first an historian of science (1941), and he also edited a massive collection, of often insightful essays, on the development and growth of technologies (in 6 vols. , see esp. 1978.

<sup>30</sup> See Carr, David (2003), Making sense of education, Routledge. Esp. see pp. 53-58 and 123-31, and which asks if education can draw from source disciplines. Carr's argument is summarised in (Maclean 2015, sec 1) . See

**(Dr. Eisenstadt)** Perhaps. Singer also wrote:

*“To us it seems that science is the source, the parent of technology. (However), up to . . . about 1500, and perhaps much later, it would be more accurate to say that technology was the parent of science”*<sup>31</sup>.

And the dedicated students of the history of both science and technology, Wolf & Mckie wrote: “*though scientific progress has sometimes preceded practical applications, yet more often pre-existing technical methods have supplied the data for scientific discoveries*”.

**(Chair)** That is very interesting.

**(Dr. Deidaghtich from the Education Department)** If teaching is partly a craft, or technology, or a form of practical knowing, then Dr. Eisenstadt's study of how other practical forms of knowledge, for example, technologies, construct their understanding may provide insights into an understanding of how development in modern language teaching occurs. That is, insights such as the above, from understanding how technologies grow, may be relevant to understanding how teaching develops.

**(Dr. Eisenstadt)** Again, that might be followed up by those interested in pedagogy. I would like to leave time for discussion. I will email you my sources after the seminar. Thank you.

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### **(3) DISCUSSION ON THE RELEVANCE OF THE ABOVE TO UNDERSTANDING THE DEVELOPMENT OF TEACHING, AND TO TEACHER DEVELOPMENT**

**(Chair)** Might we have some discussion now on the questions raised by Dr. Deidaghtich? My first question would be - might we draw implications from the history of development of practical fields for the development of second language teaching?

**(Dr. Deidaghtich)** A student of mine wrote a thesis on Comenius. Comenius derived his teaching principles not from a theory or source discipline but from work in classrooms. **32**

**(Dr. Eisenstadt)** I have read the main work of Comenius, and it is true that he did not draw from theory or source disciplines – he argued that learning should imitate nature.

**(Dr. Deidaghtich)** His teaching principles, as applied to language teaching, are not very different from those advocated in the post-war period up to the 1970s, before communicative approaches and the influence of functional-notional syllabuses disastrously swept away much of that tradition.

**(Chair)** Well, that would make a good topic for a joint seminar with the linguistics

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Maclean, A. L. , 2018c), How can applied linguistics understand TEFL?, *Radical TEFL*, **5**. Free download at <http://radicaltefl.weebly.com> . On how a source disciplines might work with a practical field.

<sup>31</sup> Singer 1956, Vol II: 774

<sup>32</sup> Comenius, John Amos, The Great Didactic Part 1, Introduction. (1896, 1910, 1967). Translated into English and edited with a biographical, historical and critical introduction by M. W. Keatinge. ) Russell & Russell, New York. ] See esp. pp. 122-135 & 142-147 of the 1967 edition for Comenius's principles of teaching. Comenius claims to derive his principles 'from nature', but this is not convincing.

department, perhaps? Let us not be distracted from exploring implications of today's presentation . Dr Eisenstadt, you say that the history of pedagogy is not your field, but would you briefly try to relate, in very general terms, your work on the development of practical fields to, er, development in pedagogy?

**(Dr. Eisenstadt)** Technical fields such as engine development develop in a mostly pragmatic way, and the development of the diesel engine, for example, took many decades of such practical 'tinkering'. Whilst practical fields may sometimes include some research work, in a scientific way, of controlling variables, they normally rely on appropriate 'pure' fields to do this work for them, and the practical field will make use of the results. But those results may not always be relevant or helpful on the ground, as Charles Singer observed in the quote I read.

The student of a practical field (we can take the example of teaching) will attend courses to be presented with such theory, and then do his practical learning at school. In the classroom, and addressing practical problems, the student-teacher will *try out* what she has learned, adapting her understanding according to local conditions. He will be a hands-on, trial-and error, workshop experimenter, trialling ideas from the theory-people.

**(Dr. Deidaglich)** How strange you should say that – it is exactly what the English founder of teacher research advocated – Lawrence Stenhouse, before teacher research was distracted from its core work by Wilfred Carr and by disastrous post-modern influences in education. **33**

**(Professor Grunewald )** I have been thinking. If pedagogy is a practical field, then to be consistent with Dr. Eisenstadt's description of how they develop, teaching a language should draw from both theory and practice, from new concepts, and from trial and error in the classroom.

**(Dr. Schmidt from the Psychology Department)** And there may, also, be implications for understanding language learning. My special interest, in the field of Educational Psychology, is how practical skills and abilities are learned. Within second language learning, speaking would be an example of a practical skill. Now, Dr Eisenstadt, you have described how learning in a practical field requires two components, or two strategies – learning from an academic field which offers insights, and learning by trial and error, this in the practical situation of a workshop. I wonder if an attempt to understand learning to speak could apply what you have said. A teacher presents the forms of the language, and the budding English speaker experiments with those forms in oral activities?

We might understand learning to speak to be a form of practical learning. The learner must react in real time, always open to amending her performance as a result of feedback; must deal with problems in the form of misunderstandings; and must in general try to put theoretical understanding into practice. John Dewey, and who was a world authority in learning before he turned to education, understood the student as an enquirer who learned in the same way as a more formal enquirer, such a scientific research worker. This would suggest that the way in which, for example,

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<sup>33</sup> Dr. Deidaglich is referring to Lawrence Stenhouse who worked at the University of East Anglia. His work on teacher research preceded that of Wilfred Carr and Stephen Kemmis (1986, *Becoming Critical*). Stenhouse died prematurely, but extracts from his work is summarised in **Ruddock, Jean & Hopkins, D. ,** (eds)(1985), *Research as a basis for teaching: Readings from the work of Lawrence Stenhouse*, Heinemann Educational. See esp. in that collection: Introduction by the Editors, and pages 20-42. This provides a summary of Stenhouse's views on teacher research. See specifically the following in that collection: **Stenhouse, Lawrence** (1978), *Reporting Research to teachers: the appeal to professional judgement*, Reprinted from (1978), *Royal Society of Arts Journal*, **126**, 5268; **Stenhouse, Lawrence** (1979a), *The psycho-statistical paradigm and its limitations 1 & 2*, which is , a short and devastating critique of using statistical methods in educational research; and see **Stenhouse, Lawrence** (1979b), *The Illuminative research tradition*, Reprinted from (1979), *Scottish Educational Review*, **11/1**.

steam engine developers learn is not different in principle from the way in which the skill learners learn. They start from provisional understanding, , they try out those understandings, they abandon what doesn't work, they return to their problem, and so on. The difference is that a student is very much on his or her own, but innovators in technology work with collaborators, they work over many years, but the strategies are the same. And this was what Dewey said – that the process of learning is universal, whether in structured enquiry, or in working on everyday problems.

Is a second-language learners, when trying out his speaking, also an enquirer? Might an understanding of how practical fields develop and learn, as outlined by Dr. Eisenstadt, help as to understand how speaking as second language is learned, and so with that understanding, help us to see how a second language might be taught? I only raise the questions.

**(Professor Grunewald)** Your observations are very interesting, and I have been thinking along the same lines. Learning might be a form of enquiry.

**(Chair)** I would like to raise another point. I found your presentation extremely interesting, Dr. Eisenstadt, for the following reason. Within education there is a debate as to how far pedagogy is a field which benefits from applying work from source disciplines, or whether it is closer to a practical field such as dentistry, where the practitioner works primarily from the problem in front of him.

If it is the case that pedagogy resembles practical fields more than applied fields, then if pedagogy allows itself to be distracted by, or even colonised by, fields which would like to influence it – such as language studies or social studies – then the teacher may lose sight of the value of keeping as central the problems in the classroom, and the problems faced by individual learners.

**(Dr. Deidaghtich)** Do you mean that pedagogy has a choice between seeing itself as an field which applies other fields – examples of such fields are engineering and medicine - or as a practical field such as building, or plumbing. It is interesting that you question the relevance of the “applied field” understanding of pedagogy, drawing from source disciplines, because Professor David Carr at Moray House in Edinburgh has also questioned the idea that pedagogy is a applied field. Others, such as Wilfred Carr, have argued in a similar way, saying that pedagogy should start from the problems in front of it – the classroom situation.

**(Professor Grunewald)** This is extremely interesting, as it takes us to the heart of the question as to how a field grows, and of how practitioners develop their own professional competence. If a practical field allows itself to be distracted by or taken over by a discipline which claim to have answers for it, then it may be prevented from developing in its own way, and may start to move away from its own problems, as met in practice – in this case, as met by individual teachers. It will develop into a theoretical field , and a split will open up between education in universities and education in the classroom....

**(Chair)** Yes, and we seem to have that split now in modern language teaching. The question is, certainly, extremely interesting, with many implications for enquiry into pedagogy. But our time is up, and I can smell the coffee. I will try to bring things together. I have learned from this seminar that practical fields and pedagogy can develop for a long time on their own, without academic input. And we have the example of the work of Comenius, who did not draw from theory. But at the same time, pedagogy should be looking out for good theory - but that theory should be shown to work, and to help address problems on the ground - in the classroom. We also have the suggestion that learning to speak can be compared to learning in a practical field. From this seminar, we have several ideas for future seminars. Thank you, Dr. Eisenstadt. We have leaned a lot, and we have even more to think about. We might continue the discussion for a few

minutes over coffee.



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heat by Watt's friend Joseph Black, esp. pp. 179-83 on latent heat.

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### On development of other technologies

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### For discussion of the relationship between 'science' and technology

For an overview of the interaction of science and experimental method with technologies in the modern, European, era see the paper by **Ubelohde** (ch. 23: pp. 667ff. ) in Singer et al eds. (1958: Vol IV). An alternative understanding of the relationship between science and technology to the one which is proposed in the text is offered by Stephen **Toulmin** in his Human Understanding Part 1 (1972: 366-78), Princeton University Press. For Toulmin, a towering student of enquiry, it is unclear how a practical field and a theoretical field modify and affect each other (ibid: 372). For technologies in China, see the work of Joseph **Needham**.

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# HOW PRACTICAL FIELDS DEVELOP, WITH IMPLICATIONS FOR UNDERSTANDING THE DEVELOPMENT OF EFL TEACHING

## Summary of the above, fictitious, transcript

The Modern Languages Department at a fictitious university in Bavaria likes to learn from other fields. To help it do this, each year it holds an all-day seminar where lecturers from other departments are invited to speak. This article is in the form a transcript of a seminar, where an argument is presented, followed by questions and discussion. At the morning session of this year's seminar, Dr. Eisenstadt from the History Department addresses the Languages Department.

Dr. Eisenstadt is an historian of crafts and technologies, and he wants to propose that, if pedagogy is a practical field, with similarities to other practical fields, then pedagogy and modern language teaching might better understand its own history and development by understanding how, for example, 18<sup>th</sup> century technology grew.

His argument is simple. For a long time crafts and technologies developed without the help of theory, and without a real understanding of why they got results. Good progress was made by trial and error, and by identifying and then *trying out* different solutions to those problems which were holding back the practical field. However, as modern science developed, insights with a theoretical basis became available for a given practical field – such as steam engine design – and which allowed the field to become more efficient. Dr. Eisenstadt concludes his presentation:

*“There seem to be, broadly, two complementary ways of advancing a practical field: Firstly, by hands-on, workshop-grounded experimentation, without an understanding of underlying processes, that is, by trial and error, by attempting to establish the conditions for success ... and, secondly, by formal scientific enquiry, that is, by more formal experimentation ... where variables can be controlled, leading to an eventual theory which claims to explain success, and which can be 'applied'. “*

In the discussion which follows, contributors explore implications for understanding the development of pedagogy. Points raised include: Exactly where do source disciplines such as language studies have a contribution to make? How far must pedagogy find its own way, staying close to its practical problems on the ground? How far is trial-and-error a legitimate or useful way for pedagogy to develop. At a root level, how does successful cooperation between theoretical and practical fields work, and what can go wrong?

Professor Grunewald, who has studied how scientific fields grow, says to Dr. Eisenstadt:

*You suggest that, like the natural sciences, practitioners experiment, but in a more informal way, focusing on results and solutions, rather than understanding? A pragmatic approach to their problems?*

There is no time to explore these ideas in depth, as it is time to stop for coffee, but the seminar participants have been given plenty to think about.

Alistair Maclean / 56 TEXT Summary 21

***Radical TEFL 7, March 2020***

# HOW DOES THE EFL STUDENT SEE TEACHING?

(Focusing on teenagers learning to speak in larger classes, and where there are no opportunities for students to speak outside the classroom.)

## (1) FOR A STUDENT, WHAT COUNTS AS A GOOD SPEAKING LESSON?

- Teacher is able to keep discipline, and keeps all students working? The teacher is rather strict, and insists on students trying to speak and doing their best? The teacher is friendly and everyone is relaxed, with lots of joking – a tolerant and easygoing teacher?
- The student knows where he is making 'mistakes' (below), and teacher does something to help? Student's work is understood by others?
- Class discussions? Group work? The teacher is able to set up pair work activities where students can practice some English? Students are allowed to work with a friend?
- Students produce good oral work? They feel positive about that work?
- The materials selected by the teacher seem relevant and just challenging enough to be practised well? Student is given space and time to move forward in his own way.

What do students in larger classes think about the above? Would they always be 'right'? Would adults and small-group learners give similar answers? What are implications for pedagogy?

## (2) CAN TEACHING AND MATERIALS BE UNDERSTOOD SEPARATELY?

What are materials from the standpoint of the learner? Do they include the teacher's oral output? Then where is the dividing line between teacher and materials - can materials and teacher really be separated? For the student, what influence does his prior understanding (or misunderstandings) have on his new learning? Is prior (mis-)understanding a part of his materials? How helpful and relevant for a student is board work - what does the student need on the board? How far is his relationship and interaction with the teacher important, and how far is interaction with materials significant? What can the one offer which the other cannot? *What is happening, in the student's learning process, as he interact with materials?* [Where can we find work on this last question?]

## (3) THE TEACHER AS A PERSON, AND AS A TEACHER

Does the teenage learner want or need a friendly relationship from a teacher? Is it important for the student to like the teacher? Might students not always not know what they need from a lesson, or from teacher? What takes priority for the learner: a teacher-as-person, or a teacher-as-transmitter of the language through her output and through selection of practice materials?

What else might a student need from the teacher as a teacher (rather than a person?):

- teacher can keep control of the class, keeping in check noisy and distracting “students” who don't want to work: those students are isolated and silenced? Creates a classroom working atmosphere, giving students space and time to work out their own learning?
- good models of pronunciation; good models of appropriate language: in the case of learning to speak, this will be dialogues with helpful content to use as a model?
- correction (below)
- clear explanations and plenty of examples, in the context of the student's prior understanding and perplexities, followed by practice opportunities through materials?

- the students' questions are answered, even if this means stopping the lesson?

How far might student answers to the above have implications for pedagogy?

#### (4) WHAT DEFINES A GOOD OR HELPFUL LESSON FOR A STUDENT?

- In learning speaking, what is the teacher's role/function, and what must the student do for himself?
- What does the student want from the teacher regarding his pronunciation? A good model? Opportunities for systematic and/or remedial practice? Correction (below)?
- For a student, what makes a good lesson?
- When students are not being presented with new language they sometimes complain that they are not learning anything - are they right, what should the teacher do when there is such student feedback?
- What stops students from learning in a lesson?
- What do students think about practice, about repetitive practice? <sup>34</sup>
- Do students think that dialogue writing is a helpful part of a speaking lesson?

Where can we find surveys or studies in the education literature which enquires into what secondary-school learners want, or need, from a teacher?

#### (5) HOW DOES THE STUDENT SEE CORRECTION?

*“The most important role of a teacher may be to help the student pinpoint their errors and target their weaknesses”* <sup>35</sup>

Does the student want his spoken 'mistakes' corrected? If so, how and when does he want them identified and/or corrected? For example, does he prefer to first ask for correction, or does he want his mistakes identified and pointed out? Does he want grammar mistakes identified and/or corrected? Does he want a written record of his mistake? Do students find that writing a dialogue helps them identify where they are still unsure, with the teacher identifying problems (in red ink)? What might student answers to the above change what the teacher does?

#### (6) WHAT MIGHT TEFL EDUCATORS LEARN FROM STUDENT ANSWERS HERE ..

... with implications for materials design; in approaches to pedagogy and classroom management; in strategies for correction and in using dialogue writing in teaching? How might student needs (or wants) be used to modify or re-think theories of language and of learning and of communication, *as applied to a large class of teenagers*? Would adults, or children, or students in small groups give different answers to the above questions?

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Alistair Maclean / RT/7 Questions ... 33

**RADICAL TEFL, 7, September 2019**

**Teacher educators are welcome to use these questions as a handout to start a group discussion.**

<sup>34</sup> Ericsson, K.A. et al (2009), The role of deliberate practice, in Shanks, David (ed.), Psychology of learning Vol. III, Sage, [article 32, and reprinted from *Psychological Review*, (1993) **100/3**, pp. 363-406].

<sup>35</sup> Marcus, G., (2012: 66), Guitar Zero. Marcus is a cognitive psychologist, and in this book studies how one learns to play a guitar, including examining the role of the teacher.

# PROBLEMS OF STANDPOINT AND SEEING IN ENQUIRY INTO SECOND LANGUAGE LEARNING

*“The meaning of the world delivers itself to the right kind of looking” and:  
“Stay close to practice”*

(both by Ludwig Wittgenstein)

Alistair L. Maclean

## INTRODUCTION AND SUMMARY OF THE ARGUMENT

### The problem

TEFL/TESOL and that part of applied linguistics which informs TEFL is arguably in a period of stasis: the current consensus dates from about 1980. I ask and explore here the root question *“What prevents a field from moving forward?”* My answer to that question is – “Because, in our enquiries and our research, we are often looking in the wrong place, or in the wrong way.” Wittgenstein (first quote above) did not claim to be original in his observation, but was drawing on what philosophy (and science) has observed since the 19<sup>th</sup> century: that belief in certain knowledge of the external world is a chimera, and that 'knowledge' depends on standpoint.

If we can understand, in general terms, impediments to progress in a field, then we may have insights for understanding how our own field of TEFL/TESOL can break free of those impediments, and move forward. For example - histories of enquiry show - progress in a field is often made not by collecting more data but through better perception, or seeing, of a problem in a field. However, clear seeing requires an appropriate standpoint or way of looking at the problem being studied, as well as clearly seeing methodological difficulties raised in investigating the problem.

### The solution?

Our entry points to understanding the way out of our problem can be found in histories of enquiries in different fields, and in work in philosophy which examines that raw material to understand enquiry and its problems. This article, taking as a case study a period in chemistry, identifies several methodological difficulties and traps which require to be avoided so that clear seeing can be achieved: clear looking and seeing requires, it is argued:

- identification of assumptions; careful questioning; & not conflating research problems;
- designing a method of enquiry which is appropriate for the research problem; and
- by staying close to practice through scrutiny and being open to feedback from the ground.

Impediments to clear seeing may be:

- a dominating framework of understanding which closes off other frameworks;
- incomplete problem definition, lack of questioning, or lack of collective memory.
- vagueness about concepts and language used;
- an inappropriate standpoint by the investigator; and
- focusing on isolated elements within the problem, so neglecting to study relations or interactions between components of the problem.

Implications for enquiry into second language learning are explored. The argument offered suggests that our present standpoint to EFL learning is partial, with its emphasis on social and

communicative aspects of second language, and that we should be looking more at the problems of the individual learner, and at his interactions with language and teaching materials.

Partial vision of a problem, and which excludes other ways of treating and seeing the problem, may be overcome - as often happened in the history of science - by a synthesis of two apparently competing theories. [Section 4.4 of the article offers insights and suggestions for a framework for bringing together dominant post-1980 theories on language learning, with pre-1980 thought.]

By studying how other theories from other fields are constructed (or fail to be constructed) one can identify common root traps and problems in enquiry and theory construction, which impede enquiry from defining or clearly seeing its problems and a way through them. From histories of enquiry one can identify factors which prevent Wittgenstein's "*right kind of looking*" and so be better placed in one's own field to avoid repeating them. Information on past enquiries is easily available in literature in the history of science and the history of education and, if probed, offers lessons on the traps present in trying to move a field forward, and which prevent clarity. Some traps are listed above.

In the field of chemistry, which I will take here as a case study (others could have been selected), progress was slow in the period 1700 - 1770 but after that chemistry moved forwards quickly and successfully, inaugurating the modern era of chemistry. Why should this have been? What root factors were at work? I will argue that we can understand the stasis, and then the sudden advance of chemistry, through understanding root issues in how the mistaken phlogiston theory was formulated, persisted for 70 years, and was then demolished and replaced. That theory was looking in the wrong place – but how and why? What are the lessons? After 1770 chemistry saw its problems and subject matter more clearly. How did it do this? The text explores this example, and suggests implications for studying second language learning. <sup>36</sup>

May it be that TEFL/TESOL is going through a 'phlogiston' period? There is no shortage of theory about language learning, no lack of research, and yet we don't understand how individual learners learn: Michael Swan wrote: "*We don't seem much nearer to answering the central (questions) 'What happens in people's heads when they learn languages, and how can we make it happen more effectively?'*" (2012: 59). <sup>37</sup> Over the last thirty years, after an initial enthusiasm for "starting from the learner", our pre-dominant starting points are language theory, social theory, cultural theory, and the teacher. The learner, *as individual, and his individual learning problems*, have been neglected. I will argue here – we have been looking in the wrong place and in the wrong way for our answers.

In the text 'she' refers to the teacher and 'he' to the learner. My own standpoints for this essay are a background in chemistry, philosophy and in the history and philosophy of science; an interest in how different fields organise their enquiries; and a background in education and secondary-school teaching.

## SECTION ONE

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<sup>36</sup> Most sources were also used for my (2019), Enquiry as Re-conceptualisation, and available as a free download from the *Radical TEFL* website)

<sup>37</sup> In Thinking about Language Teaching: Selected Articles 1982-2011. OUP. I offer an answer to Swan's question in my Learning to speak EFL as a form of enquiry, in this issue of *Radical TEFL*, drawing on John Dewey.

## The strange case (and lessons) of the phlogiston theory

From the time of ancient Greece an unsolved problem was *What is fire? What is going on when a substance burns?* The answer given by the erroneous 'phlogiston theory' of combustion in the 18<sup>th</sup> century chemistry can be better grasped in the context of its historical background.<sup>38</sup>

**1.1** It was proposed in ancient Greek philosophy (Heraclitus) that we can might understand the material world by first assuming that “all things are in flux” – concepts, empires, people and materials.<sup>39</sup> One branch of the old philosophy developed into alchemy, which was based on the idea that reality was to be understood in terms of change, or transformation – and combustion was a prime example of a transformation, or mutation. But what happens in combustion was not understood.

For 70 years the 'phlogiston theory' claimed to explain what happened in combustion, until it was overthrown and then replaced by Antoine Lavoisier (1770s). This episode is studied in the history of science because it offers many lessons on how a field can go astray, and conversely, of what is required from enquiry in order for a field to move forward. The vague, unclear, phlogiston theory was supported by the scientific community, and also had one foot in the medieval, quasi-mystical, often-esoteric thought centred on an inexplicable, changing world.

According to the phlogiston theory, in combustion 'phlogiston' was given off. This was based on the assumption that 'fire' is a substance with weight. But 'phlogiston' was not defined, nor isolated, and was never seen. It was assumed. A simple scrutinising experiment would have been to put a flammable metal into a sealed container, weighing it before and after combustion. According to the phlogiston theory the metal should lose weight, but Lavoisier was to find that it gained weight, and so disconfirmed the phlogiston theory, as well as the concept of 'phlogiston'. (This conclusive experiment had been done a hundred years earlier by the Englishman Robert Boyle, but the results were 'explained away' by answering that 'phlogiston' had negative weight).

**1.2** While the phlogiston theory lasted it was difficult for chemistry to make progress on the specific problem of combustion, and more significantly, on the general problem of what happens when substances react with each other to form a new substance – which is what post-1770 chemistry studies. But the interesting questions from this case study, for students of enquiry are:

- *How can an erroneous and vague theory, which does not match with what happens on the ground, firstly come about, and secondly, persist for so long?*
- *What are the lessons here, from the story of the phlogiston theory, for enquiry in general and for enquiry into second language learning?*

The sources tell us that there was considerable confusion in chemistry before Lavoisier about what

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<sup>38</sup> My sources for the story of the phlogiston theory are:

- McKie, Douglas (1952), Antoine Lavoisier: Scientist, Economist, Social Reformer, Constable., chs. VII, IX, X, XII, XIII & esp. XIV. ;
- Knight, David, A History of Chemistry (1980);
- Mason, Stephen (1956, 1962: 302-313) F, A History of the Sciences, Collier-Macmillan,

<sup>39</sup> The idea that the world is in flux (or is *process*) if first found in Heraclitus, a pre-Socratic thinker. The competing idea, that the world and reality is unchanging, is found in his near-contemporary Parmenides. Each of these ideas has root implications for approaches used in enquiry: if learning is a process, enquiry into it may learn from how other process-phenomena are investigated.



was being investigated in combustion, and in the related problem of respiration. Neither the problems nor the questions asked were clearly formulated. There was also conceptual confusion: for example, the atmosphere was not understood, neither was the role of air (oxygen) in combustion (and in respiration), partly because the two problems were conflated, and partly because the framework which would have allowed combustion to be understood had not yet been established.

Some prior and clear classification of the chemical elements and compounds, linking those up into a conceptual framework, was required before understanding of combustions, and chemical reactions in general, could be achieved. But chemists in the period before Lavoisier hardly understood the substances which they worked with, nor did they understand how they related to each other.

Lavoisier (with others, and especially thanks to work by his contemporary Joseph Priestly) achieved the clarification which chemistry required at that stage in its history, in order for it to move on. He performed the conclusive experiments which dis-confirmed 'phlogiston', and then more constructively, having isolated and understood the significance of oxygen in combustion, he went on to clarify, and relate to each other the known elements and compounds in chemistry, whose interconnection had not previously been seen.

Lavoisier's theory and re-conceptualisation of the subject matter of chemistry accounted for the known facts of chemistry more satisfactorily and coherently than the phlogiston theory, and the earlier muddled thinking, and the phlogiston theory rapidly lost ground.

With a consistency between observed data established, as well as the conceptual unity and clarity which Lavoisier went on to supply, a theory was fairly easily constructed which could account for chemical reactions in general. Then, through better understanding of its subject matter, chemistry and industrial chemistry both made rapid progress in the 19<sup>th</sup> century, directly leading to the present day chemical industry. The underlying problems in the phlogiston theory were identified, linked and tackled by Lavoisier (and others), who saw that they were each related to oxygen, and Lavoisier went on to introduce the key concept of oxidation (where oxygen combines with another substance).

It was this new concepts of 'oxidation' of 'combining' (together with a clear classification and conceptual framework of the chemical elements and their compounds) that allowed chemistry to then move forward, and account for other kinds of reactions. From then on, chemistry studied reactions between substances. From the 1780s it was modern chemistry, as now taught in schools. At a deeper level however chemistry was a development of alchemy, remaining the study of change, but with a clear conceptual framework.

Lavoisier achieved this needed synthesis more by argument and reflection than by empirical methods, and he was able to see the bigger picture. He brought perspective to chemistry. We can better see, from the reform of chemistry, some routes to clarity and progress in a field:

1. the need to check hypotheses through appealing to facts (weighing);
2. a field moves forward conditional on clarifying its questions and problems, subdividing them as required (The phlogiston theory conflated problems of combustion and of respiration)
3. a field requires to clarify and develop its concepts; (Toulmin 1972, and also for point 5)
4. the importance of studying relationships and interactions, rather than isolated elements;
5. even when a theory appears to be discredited and is replaced, there may be no clear breaks at a deeper level. Progress in a field is *evolutionary*. (Lavoisier developed the idea that chemistry is about the study of transformations)

Many contemporaries of Lavoisier were unable to abandon the phlogiston theory, and which lived on for some time. They didn't *see* what Lavoisier saw. Again and again in the history of a field, breakthroughs were made by people who came from another field, and who brought a fresh way of looking. Lavoisier was not a trained chemist, but an agrarian reformer, and a state tax collector, and provides a good example of the value of an outsider re-conceiving a field, and of introducing fresh enquiry methods and approaches.

## SECTION TWO

### UNDERSTANDING IMPEDIMENTS TO HELPFUL ENQUIRY

We introduced the question above, “*How was the phlogiston theory able to survive, and not advance, for 70 years?*” If we can understand what prevents a field from helpfully moving forward, and especially if we could understand what is going on under the surface of enquiry, we might be able to understand and so remove those impediments. We might also better see and understand conditions which help a field to move forward.<sup>40</sup>

Well-constructed enquiry, and which succeeds in moving a field forward, is not a hit-and-miss enterprise, but understands how to avoid pitfalls and how to base itself on secure foundations. It pays attention to its methods of enquiry. It sees clearly. In the following I have in mind fields which claim to have applications for practice, for example chemistry. Sources in the history of science reveal some root features which impede enquiry:<sup>41</sup> We will now examine some factors which prevent progress. (In the rest of this section and in section 3):

#### IMPEDIMENTS TO PROGRESS IN A FIELD

##### **2.1 The influence of a dominating theory**

A dominant theory (DT) or framework in the field is so strong that other theories or concepts are neither looked at, nor accepted for consideration, unless they are compatible with the DT. This may mean that work which challenges the dominant theory is not considered or published, as it does not pass peer-reviewers, who begin from their (perhaps myopic) closeness to the DT and its assumptions. But although the DT may have, at an earlier time, helped to move the field forward, the DT is entrenched, has exhausted its possibilities, and becomes an orthodoxy, a “dogma”. There are numerous examples in the history of science. Or, it may not be a theory which becomes entrenched, but a method of enquiry commonly used by the field.

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<sup>40</sup> The phenomenon of progress in science which is followed by relative stasis was famously analysed by T.S. Kuhn about 50 years ago, who proposed that there are 'revolutions' in a field, interspersed with periods of 'normal science'. Kuhn's thesis of revolutions was more or less uncritically accepted by many, but critiqued by some philosophers of science, who had studied and probed more carefully perhaps than Kuhn how fields develop. Kuhn was an historian of science, and wrote a valuable book on the Copernican revolution. But he was not a philosopher, and he did not probe the root issues which drive a field forward – or drive it into dead ends. Kuhn's (1970 2<sup>nd</sup> ed.) The structure of scientific revolutions, reputedly sold 650,000 copies over 25 years and uncritically entered the consciousness of the academy community. The major philosopher and historian of ideas Stephen Toulmin, who critiqued Kuhn's thesis (in his 1972: 96ff., Human Understanding Part 1), argued that fields *evolve* and that Kuhn was mistaken in his *revolutionary* thesis.

<sup>41</sup> For sources used in this section, see the bibliographies and sources section of my (2019), Enquiry as Re-conceptualisation, and available as a free download from the *Radical TEFL* website)

Probing deeper, a theory has as a foundation a conceptual frameworks, composed of concepts of leading ideas. It is these ideas or concepts which may require to be reconsidered, as prior work, before the theory itself is seen to require revision or development, or can be reconsidered. (Toulmin 1972, *Human Understanding Part 1*). Further, but beyond the scope of this study, the dominating theory may come to have ideological elements.<sup>42</sup>

## **2.2 Held back by unexamined and restricting assumptions,**

Assumptions act as blinkers, preventing a clear view. A field may be taken over by a myth (“a commonly held unexamined assumption”) and then avenues for clearer seeing are closed off. One assumption which thinking in post-1980 TEFL/TESOL thought arguably makes is that because its insights will work in small classes, they will work in large classes. I explore this assumption now: that what works at a small scale will also work on a larger scale, taking as an example the case of laboratory chemistry and its application to large-scale industrial production.

**2.2.1** When a 'pure' field (such as chemistry) proposes that its insights can be extrapolated for large-scale use (as in industrial chemistry), there is a risk of un-reflectively assuming that what will work on a small scale will also work on a large scale. Industrial chemists (for example, in designing and running an oil refinery) do not however make this mistake, as their work is to solve the problems which arise when moving from small scale to large scale chemical reactions and processes. Typically, in industry, when scaling up a process from small to large volumes there is a loss of quality in the output, and also, aspects of the process which work at a small scale simply do not work at a larger scale. These problems may occur because required conditions cannot be maintained at larger scale, for example in the large-scale processing of chemicals, smooth liquid flow in idealised laboratory becomes turbulent flow in the chemical plant, and so for example temperatures (and pressure, and concentrations of chemicals) which require to be uniform and constant for a chemical reaction to work efficiently are no longer so, resulting in a poorer quality output. Further, different skills may be required from an operator of a chemical plant compared to the laboratory chemist, even although they are setting up and maintaining the same chemical reaction. Industrial chemistry can also teach us that we cannot hope to fully understand chemical reactions. Chemical engineers tackle these problems by understand that they are studying *a* process. They renounce precision and work with approximations, flow diagrams and models.

In work on second language teaching and teaching there is a risk of assuming that what will work in an ideal, small class will work in a large class. If problems in moving from small scale to large scale processes are similar in different fields, we may be able to learn from industrial chemistry here. In enquiries into EFL learning, unless problems of, for example, up-scaling are acknowledged, addressed and understood, it is surely difficult for those enquirers to extrapolate claims made for teaching small groups to large classes, and to move their field forward in the sense of claiming relevance for teaching and learning EFL. It is often apparently often assumed, without referring to what happened in large classes, that what works in a small group of highly motivated learners will work in a large class of teenagers.

## **2.3 Not keeping close to practice through scrutiny, this requiring a clearly stated theory**

A field may be prevented from moving forward if it loses contact with practice, because the 3-stage loop through which enquiry works is broken, lacking a scrutiny or validation stage. The 3-stage loop which John Dewey claimed to have identified in all kinds of enquiry (my 2017) of (1)

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<sup>42</sup> On ideology in education, for a article which argues that ideology tends to become part of an educational theory, see Eastman, George (1967), *The ideologising of theories: John Dewey's Educational Theory as a case in point*, *Educational Theory* 17/2, esp. pp 103-115.

*problematic situation; (2) theory / hypothesis / knowledge claim; and (3) scrutiny* cannot operate. So, the field loses the opportunity to learn from practice, because feedback is not available for redefining the starting problem, and then formulating an amended theory or hypothesis.

One significant feature of Dewey's understanding of enquiry is that, for practitioners on the ground addressing local problems, it is the *consequences* of a given theory which are of interest, and not whether the theory is a 'true' one. That is, in the context of addressing local problems, as in for example a classroom situation, a theory is validated if it solves a problem, that is, if *it works* in a given context. Validation here is interested in results, and not in 'truth'.

Further, if we follow this notion (and which derives from pragmatic philosophy), a practitioner-teacher will validate a proposal through *implications* which derive from the theory, and not the theory itself. However, a condition for doing this work is that the theory is stated clearly. It is difficult to scrutinise a vague theory, and its implications will be unclear also. For example, under which conditions are they applicable? One criterion for a helpful theory (or hypothesis) is that it states how the theory how it can be scrutinised, or dis-confirmed. Lacking these conditions, a poor, vague theory will fossilise and persist, because it is un-falsifiable, as happened with the phlogiston theory. It protects itself from disconfirmation, in the way it presents itself. It does not allow itself to be clearly seen.

## 2.4 Insufficient questioning

For John Dewey questioning is often synonymous with enquiry and it is questioning which drives an enquiry forward. We note that the verb 'to enquire' implies 'to ask': an enquiry is a process of asking, probing and challenging what was believed to be known. Enquiry helps us to 'unlearn', and to look again. A field which is not moving forward may have failed to ask questions which, if asked, would allow the problem to be understood, unpacked, and seen more clearly.

Questions may be left unasked because it is *assumed* that the field is proceeding in a correct direction. The field may have been (unknown to itself) captured by an ideology, and which does not encourage questioning. Questioning requires looking under the surface, and a field which is complacent will not do that, and in the same way, a field which relies on empirical work and neglects a rational and reflective component will not probe beneath its assumptions through questioning. Such work cannot count as enquiry in the sense which the word is used here (nor can diary reports and 'narratives', although they may provide alternative routes to clearer seeing).

Post-1980 work in TEFL/TSOL drew its authority from the work of, for example, the philosopher of language Austin, and from Hymes, (neither of whom intended their insights to apply to second language learning) post-1980 work in TEFL also drew from social studies for its foundations, which is an insecure and perhaps ideological field. Academics in applied linguistics then assumed that their ideas and research results could be applied in the classroom. As an aid for those working on learning theory, mainstream education could have offered many insights concerning problems and traps in researching learning and in classroom research. Those academics then made claims for classroom implications of their work without apparently consulting literature from the field which studied the classroom education, and which warned of pitfalls.<sup>43</sup> The post-modern ideology which influenced their work was not questioned by them.<sup>44</sup>

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<sup>43</sup> See especially the work of Martyn Hammersely. I have given citations of his work in the bibliography (only in the e-version) of my (2017), Re-conceiving 'teacher research' with the help of John Dewey's theory of enquiry, *Radical TEFL*, 4, Free download at <http://radicaltefl.weebly.com>

<sup>44</sup> See Denzin, N K & Lincoln Y S, (eds)(2000, 2<sup>nd</sup> edn.), Handbook of Qualitative Research,

## 2.5 The problem which the field is addressing is not clear

An impediment to asking probing questions may be that it is not clear what problem the enquirer is addressing: the enquiry does not start from a clearly thought-out problem. At a deep level, the problem presented may use terms that are ambiguous or multi-faceted, or a problem may mask the existence of two or more problems contained within the stated problem, each of those subsidiary problems requiring a separate treatment. One reason for the persistence of the phlogiston theory was that, while it believed that it was addressing a single problem, it turned out that it was addressing two problems – combustion and respiration – which had similar surface aspects. So, being unclear about the problems it was addressing, it was difficult to organise enquiries.

When supervising student dissertations (as well as in my own work) I found that when one is willing to re-conceive the starting problem then things will go better. One may see that one is working on two problems, this requiring a choice as to which one to select. Or one may see that one's starting problem is too superficial (or too general). Or, it may be that in the course of drafting a research paper, one's imagination is caught by a related and more relevant problem. In each case, a willingness to reconsider the original research problem results in better, more probing, work. There is a lesson here, identified by John Dewey, who argued that *the determination of a problem is progressive*.<sup>45</sup> That is, a problem will require to be refined and redefined in the course of an enquiry. The work of refining one's problem is allowed for in both Dewey's (and Popper's) understanding of how enquiry proceeds, because they each understand enquiry to be provisional, looping work, in the form of a circuit, this allowing a return to not only one's knowledge claim, *but to one's problem*.

If one is not clear about one's research problem: first, it is difficult to scrutinise claims to solve the problem, as not knowing what one's problem is, one cannot judge whether or not it has been solved; and second, lacking a clear (provisional) starting problem an enquiry cannot return to the original problem and redefine it and so move the enquiry forward, as it is not clear what the problem was. In a field which has lost contact with issues in applying its theory, problems are often purely scholastic (for example the study of 'pragmatics' in applied linguistics), of no practical value or significance. Scholars dispute with each other, in their journals and conferences, and implications for practice, and feedback from practice, are not referred to or sought.<sup>46</sup>

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SAGE. A well-selling textbook in the USA, but quite lacking in rigour or in an awareness of deeper problems in doing enquiry (I believe that neither Popper nor Dewey are cited in any of the articles, but I could not bear to read to the end). Authors of the articles are generally quite unreflective and uncritical of their claims, and articles are generally polemical, and do not identify or discuss underlying issues and problems in educational research. It is the kind of work offered here that much work in second language studies relies on and cites. The same academics dismiss authorities on educational research such as Martyn Hammersely and Graham Nuthall – because they start from an alternative 'realist' understanding of enquiry. However, Hammersley understands the deep issues and traps in enquiry, and in educational research while second language studies does not. Perhaps the leading UK authority on educational research and on the problems in doing it, Richard Pring, is not cited, so far as I know, at all, by British applied linguistics. This field – which claims to study learning – but is rooted in language studies.

<sup>45</sup> Dewey writes in his *Logic: a theory of enquiry*, (1938: 113, Boydston 1984 edition) “*inquiry is a progressive determination of a problem and its possible solution*”; and (ibid: 245) “*Every special inquiry is ... a progressive and cumulative re-organisation ... a process ... of transition*” Or see his *How we Think* (1910: 167-68).

<sup>46</sup> For an entertaining portrayal of the academic world see David Lodge's novel *Small World*.

In studies of second language learning the foundation problem *How are second languages learned?* may require to sub-divided into many subsidiary problems, each perhaps requiring different enquiries, methods of enquiries, and hypotheses. Addressing the problems of learning to speak, one perhaps needs to consider separately problems of:

- learning to passively understand the language system;
- learning to mechanically manipulate the language system;
- bringing passive understanding into use, as in a role play;
- do adventurous and risk-taking learners employ different learning strategies than those used by less pro-active learners? and
- How far do learners need time and space to work out their own learning paths?

Each of these problems may benefit from a different theory of learning.

## 2.6 Lack of a collective memory

A field may believe that work from its past can be disregarded, and such work may be neglected, by default, as 'outdated'. Work may be withdrawn from libraries, or simply not cited. The field assumes that because some of that earlier work was weak, then all of it can be rejected. For example, there are few citations in post-1980 work on language learning to pre-1980 work – which seems to be regarded by post-1980 studies as a different country, apparently largely unknown by them. In this way, lessons from the past are lost. However, there are many examples in the history of enquiry where a breakthrough was made by returning to an earlier idea, and perhaps integrating or synthesising that idea with aspects of contemporary work.<sup>47</sup>

Within TEFL/TESOL, there was a fairly sharp break with the past around 1980, and work done in the period up to then was replaced by influences from communication and speech act theory. Whereas pre-1980 TEFL still took account of classroom issues, the classroom was less important, post-1980, as academics in TEFL had a background in language studies rather than in education. As a result, work in post-1980 thought was not assessed against classroom realities. Although social and cultural factors in language learning received more attention post-1980, less attention was given to the problem of the individual learner and his problems.

## 2.7 Interdisciplinary work

One further way in which a practical field, such as TEFL, can better see is by standing outside itself, and studying how another field, which is in some way analogous, works, and this may give a useful perspective, that is, a different viewpoint. The two fields may be partly analogous in content, or their enquiry methods. This is quite different from, in a top-down way, simply applying theory from a one field to a practical field. The analogy-seeking work can be done by searching for similarities at a deep level, and I have tried to do this in some of my own work in *Radical REFL*, (for example, in this issue of *Radical TEFL*, “*How practical fields develop, with implications for understanding the development of EFL teaching*”).

## Summary of section 2 and link to section 3

In this section, and the next, we have in mind Wittgenstein's reported saying “*The meaning of the*

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<sup>47</sup> For example, in atomic physics after 1887, as recorded in Hoffman, Banesh (1959), *The strange story of the quantum*, Penguin. Pages 13-69 are excellent as a case-study description (by an insider scientist, but written for the non-scientist) of how a field develops, with many reflections on the process of the development in a field, through hypotheses, dealing with contradictions between evidence and theory, and so on.

*world delivers itself to the right kind of looking*". For him - and Wittgenstein worked for a while as a hands-on aeronautical-engine designer - enquiry was often less about seeking more information, and more about re-arranging what was already known, about clear seeing of what was already there. To do this work requires appropriate standpoints

We have explored in this section several methodological problems which impede a field from seeing how to move forward. These were: the problem of a dominating field, unexamined assumptions, lack of scrutiny, incomplete problem definition, lack of questioning, as well as lack of collective memory. In section 3 we develop this idea, and consider a group of further problems, within enquiry, which impede clear seeing.

## **SECTION THREE**

### **FURTHER PROBLEMS IN LOOKING AND SEEING IN ENQUIRY**

In the history of enquiry, and when breakthroughs were made, those working in the field subsequently must have asked themselves, 'How was it that my predecessors were not able to see what seems so clear to us, now?' If we can understand what prevents 'clear seeing' during enquiry, we will have better understood how to organise enquiries. I propose three related reasons:

1. enquiry method; (3.1)
2. standpoint; and (3.2)
3. the need to look at and study relations or interactions. (3.3)

Sources for claims made here are from the history of science, and are given at the end of my (2019, *Enquiry as Re-conceptualisation*).

#### **3.1 Enquiry method**

A field may be restricted in its vision or perspective, because it uses a method of enquiry which may not be able to see what is most important. Those neglected problems may supply the key to moving the field forward. The method may simply have been appropriated from a field which is different in kind, perhaps selected because it gives respectability or a 'scientific' veneer to the field. An example of such a method is the use of statistics and mathematics, used in education and in economics. Further, because mathematical treatment of data is technical, there is a risk of mystification. Or, the field may simply not pay much attention to its method of enquiry, and pass over issues arising on the selection of a method of enquiry. The choice of a method of enquiry may may exclude other approaches, meaning that consideration of aspects of a given problem is omitted. For example, an observational approach to teaching cannot observe the teacher's thinking as she comes to decisions, and which may be more significant for understanding teaching than a study of the teacher's superficial and overt actions.

#### **3.2 Standpoint**

**3.2.1** The question of method of enquiry relates directly to the question of standpoint. In enquiry after the 17<sup>th</sup> century scientific revolution, an objective standpoint was generally used, as this removed the bias which an observer can create by introducing herself into an enquiry. It also made it easier to replicate and so validate studies. However, there was from the time of Vico an alternative and subjective approach, first used in history, where one tries to enter into an epoch, or into the thinking of people in that epoch, and this approach became influential in the social sciences.

In the past, and especially in the academy, the questions "What is EFL learning?" and "How does EFL learning occur?" have generally been posed from outside the learner: investigators have looked at learning from the outside-in, focusing on language; they have often used an 'objective' approach to their enquiries, using methods borrowed from the mathematical sciences; and they have defended their approach by pointing to the rigour (sic) and status of those sciences. Like those sciences, they

have looked for answers to their research questions in quantitative or statistical terms. But in trying to be rigorous, and in being necessarily detached from the subjects of their enquiries, they have often only been able to investigate what can be measured, what can be analysed – what is quantifiable.<sup>48</sup>

A problem when investigating human phenomena is that a detached or 'objective' standpoint, requiring recording of data in a way which can be replicated by others, leaves out much of the picture. Further, a series of questions are raised, and I have classroom observation in mind:<sup>49</sup>

- Is there such a thing as a 'neutral' or 'detached' observer – doesn't an observer inevitably bring assumptions to his observations?
- Might these assumptions, or expectations, affect what he observes?
- When there is an observer in a classroom, perhaps taking notes, can we assume that both teacher and learners behave in the same way as when there is no observer? What are some implications of the answer to this? Might the students try to do better because they are being observed?
- How can an observer know if she is only seeing what is on the surface, and is not missing what is at a more significant and deeper level? If one defines (and so restricts) what one is looking at or looking for, does one not then miss what is not specified for observation, and which might be relevant?
- How can 'subjective' kinds of enquiry (for example, diary reports) know whether they are unknowingly influenced by some underlying ideology?<sup>50</sup>

There has been a reaction against 'detached' and 'scientist' approaches to understanding the classroom and learning, and some forms of investigation (diaries, narratives) have adopted more 'subjective' standpoints, meaning that there now exist a variety of approaches and standpoints for attempting to understand EFL learning. However, these methods raise their own methodological problems, which cannot be discussed here, but which are explored by Martyn Hammersley.<sup>51</sup>

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<sup>48</sup> For example, Lawrence Stenhouse, inaugurator of teacher research, and eclipsed by Wilfred Carr's (1986) 'Being Critical', argued that statistical methods were inappropriate for studying the classroom. He pointed out that such methods were designed for agriculture, whereas teaching is more like gardening. See Stenhouse, Lawrence (1979), The psycho-statistical paradigm and its limitations 1 & 2, in Ruddock, J. & Hopkins, D., eds (1985). Research as a basis for teaching: Readings from the work of Lawrence Stenhouse, Heinemann Educational. See esp. Introduction by the Editors, and pages 20-42. Provides a summary of Stenhouse's views on teacher research.

<sup>49</sup> On methodological problems in classroom observation see the work of Martyn Hammersley and co-workers, from the 1980s: Hammersley, Martyn, (ed)(1986), Controversies in Classroom Research, Open University Part One Hammersley, M. (ed)(1986), Case Studies in Classroom Research, Open University.

<sup>50</sup> On this problem, see Philips, Derek L, (1973), Abandoning Method: Sociological Studies in Methodology, Josey-Bass. See pp. xii; 5-10; 13; 16; 57; 60-61; 66; 70; 72-79; 82-97; 100-01; 114-21; 124-25; 129-35; 138-40; 142-43; 149-50; 154-56; 165-69; 175 & 178. Although a rather old text, valuable for identifying and discussing many sources of bias in social research. Also see Hammersley (following footnote)

<sup>51</sup> On problems in ethnographical enquiries, also see: Hammersley, M, (1990), Classroom Ethnography, ch. 6 & esp. ch.7, Open University Press. **Key**; Hammersley, M., (1992), What's wrong with ethnography?, Continuum. See pp. 46-49; 57-79; chs. 8 & 9. Also see Hammersley M (1989), The Dilemma of Qualitative Method: Herbert Blumer and the Chicago Tradition, Routledge. See pp. 18-32; 45-55; **113-21**; 182-93 & 214-15.



**3.2.2** A selection of standpoint is not only a binary subjective-objective option, but a standpoint can include what one focuses on in an enquiry. In the phlogiston theory, those who advocated it focused on the material (or substance) which was burning. However, the key to understanding what was happening in combustion - Lavoisier saw - was the atmosphere (more precisely, the 20% of oxygen in the atmosphere but which, before Lavoisier, had not yet been physically isolated and so not studied). Once the concept of oxygen was presented and studied, combined with a study of what happened to a metal or compound during combustion (in particular, loss or gain in weight), progress was made. But until that time, enquiry into combustion had been *looking in the wrong place*, or we might say, it didn't know where to look – or perhaps worse, it didn't know that it didn't know, but relied on unexamined assumptions.

In 'communicative language learning', enquiry and theory look at and focus on the social or communicative aspects of learning. While the theory claims to be interested in the learner, in my own teaching experience, what interests learners is their own separate and individual learning cognitive difficulties and problems (and these were studied in the pre-1980 period). Enquiry which begins from socio-communicative assumptions does not study this aspect of learning, and so is partly *looking in the wrong place*. If learning is an individual journey, then a theory of learning which studies the social aspect may offer valuable insights, but can not offer a complete understanding. Integration with other standpoints is required. (Explored in Section 4)

### **3.3     The need to study relations or interactions**

Sec. 3.2 above directly leads to the need to look at connections, links, relations and interactions in the subject matter of a field, and not at isolated elements or problems. The problem is directly relevant to second language learning studies, where learning is often studied outside of the context of implications of work for pedagogy.

The phlogiston theory paid attention to the transformation which a burning substance underwent, and not to its interaction with the surrounding air. However, Lavoisier, as part of his reform of chemistry, saw that the key in studying combustion was to understand the interaction or relationship between air (oxygen) and the substance. When this interaction was studied, and partially understood, chemistry made rapid progress. From then on, chemistry *was* the study of inter-reactions, that is, chemical reactions, between chemical substances. As preliminary work, however, the chemical substances required to be classified, and understood better, and Lavoisier was also the chief worker in doing that. Progress in science is sometimes made by, analytically, studying isolated features, but it is also made by studying the connections or links between features.

Analogously to the neglect by phlogiston of the atmosphere and of interactions, while post-1980 enquiry into second language learning studies *social relationships* in learning, it neglects to study *the relationship which the individual learner has with the second language*, and in particular, neglects to study or take into account the relationship the individual learner has with learning material. It may be that a study and understanding of the individual learner's language-learning problems may be a key to moving forward an understanding of second language learning – but what will our entry points be for doing that work?

I suggest – the learner's interaction with teaching materials, and with both his/her first and target language. If an understanding of this relationship (or interaction) could be combined or complemented with work on social and communicative aspects of language learning, then we may have a powerful model of language learning, or a synthesis in a unified theory (Again, explored in section 4 below). Moving from understanding of one aspect of a problem to a synthesis which brings together other aspects of a problem is exactly how enquiry has often made its great

Let's look at the bigger picture. The history of enquiry suggests that fields make progress, in an interdisciplinary way, *by looking for and establishing links* with other work or phenomena. Physics made progress by establishing 'laws' which link, for example, the pressure and volume of a gas. Social sciences, and medical research, make progress by identifying correlations. Cosmology made progress by linking up with terrestrial physics. Modern physics began when Faraday linked electricity and magnetism. Other fields (for example environmental studies) have made progress by studying relationships, such as between the ocean and the atmosphere, regarding a study of only the atmosphere as inadequate. This movement, and which second language learning studies might learn from, derives from insights in philosophy, now over a hundred years old, which argues that reality and meaning is not to be found in isolated elements, but in relationships between elements. <sup>53</sup>

**3.4 Vested interests** Yet another problem is that those who advocate a theory may often be very close to it, and have no interest in querying it. However, if no one in the field has sufficient distance from a dominant theory to question it, a hegemony may live on. Also, if journals are peer-reviewed by those who are attached in some way to the pre-dominant theory, work which challenges it may not be published. Peer reviewers may, honestly, not see the significance of work which challenges the dominant theory. A problem of 'partial seeing' can arise where a sponsor (perhaps the state) funds the academy, and can influence careers, as happened in the Soviet Union in the 1930s with genetics. An argument can be made that in the UK the British Council was captured by those interested in commercially applying communicative theories of language learning, a movement mostly used in small, ideal, groups, and was not scrutinised or validated in large classes.

**Solutions to the above** What to do? Every successful field which I know of protects itself from the above dangers in the following way: it has a branch which stands outside the field to an extent, and scrutinises the way in which it works. This branch is normally called "The philosophy of science", or "The philosophy of education", and so on. Those fields act as critics of the field, and do their work in a very similar way in which I have done above, in identifying ways in which a field can go astray. These critics try to identify what the field requires to move forward, at a more probing level than the more routine workers are able to, and often have a background in philosophy, whose work is to challenge claims to knowledge.

This work, at its best, is not a negative enterprise, as by clearing away misconceptions and

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<sup>52</sup> Roy Porter writes: "*After Newton, the various physical sciences made their separate advances ... (but from) the nineteenth century, the great scientific advances came through demonstrating a higher level of unity in these apparently distinct phenomena (and for example) demonstrated that magnetism, electricity, energy, light and gravity ... were all intimately connected*" Porter, Roy (1987, ed.), *Man Masters Nature*, BBC Books; for Porter's Introduction, and for the papers on Aristotle, Kepler, Galileo, William Harvey, Priestly, Lavoisier, Darwin, Pasteur, & on Watson & Crick. A very penetrating collection of articles, revealing the process of enquiry.

<sup>53</sup> Dewey, J. (1929, 1984), *The Quest for Certainty*, ed Jo Ann Boydston, Southern Illinois University Press, pp. 80-86; 136-45 & 218-22; or for another example in philosophy advocating the study of relationships, see Whitehead, A N (1925), *Science and the Modern World*, Penguin. Chs 4 & 5. In a similar way, from the 19<sup>th</sup> century (especially in Germany) the question of standpoint, and the fallacy of the subject-object dichotomy was explored, and such thinking (often unacknowledged) entered 20<sup>th</sup> century thought.

confusions in method and approach, the ground is cleared for a field to move forward.<sup>54</sup> Within second language studies such a branch does not exist and one reason for starting *Radical TEFL* was that I wanted to publish work of that kind. At the moment there is no other forum for publishing work standing aside from our field. In the 1993 volume of the journal *Applied Linguistics* there was, it is true, some discussion (followed by articles later that decade). But the problem of refereeing persists, and the question arises of who in that field understands issues in enquiry well enough to be able to do such work.

### **Summary of the argument so far**

I have now completed a survey of some impediments to enquiry in a field, and which result in partial vision. In section 2 the following impediments were identified: the problems of a dominating field, unexamined assumptions, lack of scrutiny, incomplete problem definition, lack of questioning, as well as lack of collective memory. Each of these problems share the general and underlying problem that they may prevent the field from seeing clearly. Further impediments identified in this section were enquiry method; standpoint; not studying relations or interactions; and vested interests. Section 4 will explore one aspect of a solution: by synthesis of different approaches.

## **SECTION 4**

### **How can two 'competing' theories be brought together in a synthesis ?**

In the history of enquiry there are many examples of a new theory or conceptual framework replacing an old one (Toulmin 1972). However, the most useful advances in enquiry seem to occur when the best aspects of two apparently competing theories come together in a synthesis, uniting the two theories and opening up new ways of understanding. Within TEFL/TESOL studies at the moment, we are perhaps at a point in our field's development where post-1980 theory (or cluster of theories, or school of thought and practice) has replaced an old pre-1980 school of thought and practice or theory (or cluster of theories). However, and so far as I know, a theoretical synthesis between the two schools has not been achieved – although teachers often eclectically and pragmatically draw from what is helpful in both understandings of language learning. If the historical evidence shows that a synthesis can often be valuable, then might it not be worth trying to bring those two pre- and post-1980 theories together, in a unified theory or synthesis? However, a prior study to this question will be to understand, from the historical evidence, how two theories come to be synthesised, and which this section will attempt to begin.

It will be helpful to consider what is going on when for example two theories which (apparently) address the same problem collide. We will need to: (a) briefly consider what is required as conditions for a theory to be accepted; (b) look under the surface of enquiry, and regard our problem here not as lying in the content matter of theories, but of the way in which they make claims to understanding and knowledge, and develop and; (c) consider this problem as part of a more general problems of understanding the growth of knowledge.

It may be objected, against this project, that enquiry into a human science such as education has little in common with enquiry in 'science' - but the detailed evidence available in those superficially different kinds of enquiries does not support this objection: although fields may be quite different in

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<sup>54</sup> There also exist fields of: “The Philosophy of Biology, “The Philosophy of Chemistry”, “The Philosophy of Religion”, “The Philosophy of Language”, and so on. When I studied undergraduate philosophy we were required to study the last two, as well as “The Philosophy of Science”. Philosophy becomes useful when it applies its methods of analysis to specific problems in other fields, although the aims of philosophy are often quite mis-understood.

their content matter and problems, the most successful attempts to make progress in different fields seems to follow a similar pattern. Both John Dewey and Karl Popper argued that there was a commonality or unity in the process of enquiry, across all kinds of fields, and I will follow that thought.<sup>55</sup> This means that lessons from enquiry in sciences might be extrapolated to enquiry in education, and in particular extrapolated to TEFL/TESOL studies on the nature of second language learning, and of how it takes place.

I now introduce some prior questions and problems:

1. What is required from a 'theory' to be counted as reasonable one?
2. What is going on, under the surface, when two theories which address the same general problem seem to collide?
3. The error of neglecting earlier work, and of making a break with the past
4. By which processes do old and new theories come to a synthesis?
5. Implications for TEFL of the above

In addressing these questions, I have in mind examples in the history of science (sources were given in my 2019 *Enquiry as Re-conceptualisation*), and I will consider how examples from enquiry in science may have lessons for attempts to bring together pre-1980 and post-1980 theories in second language learning studies..

#### **4.1 What is required from a 'theory' or hypothesis knowledge claim to be counted as a helpful one?**

As a minimum condition for being a 'theory-candidate', a theory needs to be: clearly stated, as to what facts it claims to encompass; as to what it claims, and on what evidence it cites to support its claims. The theory requires to be stated clearly, allowing it to be challenged: a vague theory does not allow this, as it is difficult to argue with a theory if it is not clear what it claims, and under which conditions on the ground it claims to be relevant and applicable. A theory should be formulated in such a way that a challenger should be able to scrutinise it.

Further, a helpful theory is one which explains, or helps to make sense of what other theories cannot; and there should not be contradictions between the theory and data - although this would not invalidate the theory, as it might be "rescued" and redefined by restricting its scope, and of what it claims to account for. Possibly, in introducing her theory, the originator might have found that it would account for something which the then-existing theory did not account for? But then she (or co-workers) made the mistake of claiming too much, and not stating under which conditions his new claim would be applicable for, because she did not subdivide his problem, as required. For example, in TEFL/TESOL, perhaps large and small classes and small classes need to be considered as separate learning problems, because learning in ideal conditions proceeds in different ways from learning in difficult conditions? (Teachers might give robust answers to this.) Perhaps the idea of 'learning EFL' requires different theories for different aspects, and stages, of learning?

#### **4.2 When two theories seem to collide**

We ask here: What is going on, under the surface, when two theories which address the same data or problem, apparently collide, a choice between them is (apparently) required? A problem or

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<sup>55</sup> See Popper's *The Poverty of Historicism*, section 29. On Dewey's understanding of enquiry, this is presented in my (2017: Introduction), *Re-conceiving 'teacher research' with the help of John Dewey's theory of enquiry*, *Radical TEFL*, 4, Free download at <http://radicaltefl.weebly.com>

contradiction met in applications for practice within an existing theory can supply a starting problem for work on a new theory. However, the contradiction or problem does not mean the theory is 'wrong': it may indicate that the old theory is claiming too much, or that the existing theory has not stated clearly the conditions under which it applies.

When a new theory challenges and claims to replace an old theory, it is wise to examine whether, how and where the old theory still has something to offer. For example, if cognitive understandings of language learning want to challenge post-1980 thought in TEFL, or seek to co-exist within that theory, perhaps cognitive/mentalist theory should show where it is relevant, and where socio-communicative theory is relevant; a theory must be clear about which aspects or sub-sections of a problem it addresses.

However, prior work here would be to describe and argue for which data on the ground a theory can account for (in this case, pre-1980 theories), and acknowledge what post-1980 work can account for. This should be straightforward work, using the method of dividing the problem into separate parts: the new theory might be able to account for some parts, and the old theory may be relevant for other parts. A condition for doing this would be to withdraw the assumption that there exists one, universal, theory of second language learning, and acknowledge that different theories are required, depending on the aspect of language being learned.

#### **4.3 The error of neglecting earlier work, and making a break with the past**

In order not to lose helpful aspects of an old theory (the historical evidence tells us) part of the work of introducing new theory should be to show where there is still relevance for the old theory. A similar idea would apply for one method of enquiry claiming to replacing another - and also, for one concept claiming to replace another. New theory might concede where the existing theory is correct - where it is applicable, and might simply introduce a qualification into an existing theory, and work from there, trying to introduce the new theory in the space left by the qualifications. Or, the two theories may be incompatible (incommensurable) - but this should be established and not assumed. For example, pre-1980 theory may be helpful in understanding controlled practice, while 'constructivist' or 'schema' theory might help understand free practice and role play work.

Before introducing a competing theory, it is wise to understand the old theory, and its historical context, and what it was trying to achieve, as well as, what the context was of its origin: its context. This will allow a competing theory to better argue where [at what places, and for what problems] the old theory is *inadequate*. It is not helpful to claim a theory is 'wrong', rather, one can point out where it is inapplicable or inadequate or incomplete, and specify in which places and in which respects. However, in the academy, careers are made by demolishing an old theory - and it may be that this problem explains why, so often in science and also philosophy, that breakthroughs are made by people from outside the academy, or from another field.

A serious problem with a new and plausible challenging theory is that the best of the old may be lost. This will be especially dangerous if the challenging theory has an ideological aspect, meaning that evidence against it is not accepted by 'ideo-logues' and who, by definition of the word, are firmly attached to an idea, and not to evidence or to argument. Post-1980 thought in second language learning studies arguably has just an aspect. (An interesting paper in this connection argues that, unless precautions are taken, educational theories tend to develop into narrow ideologies, cut off from practice. <sup>56</sup> ) New thinking often proceeds in reactions against the past, and through 'black-and-white thinking', where everything is rejected, together, in an all-or-nothing-way, risking leading to an opposite extreme.

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<sup>56</sup> Eastman, George (1967), *The ideologising of theories: John Dewey's Educational Theory as a case in point*, *Educational Theory* 17/2, esp. pp 103-115.

An example of the danger of neglecting 'old-fashioned' theory is found in physics. Major advances in atomic physics began (in 1887) just at the moment when classical physics had become complacent, and thought that it had mostly solved its problems. The physicists who broke through this stasis and introduced a new physics did this by *returning* to a old and rejected theory about the propagation of light and energy. This example suggests that, just because an old theory is replaced, that does not mean that it is finished. We have this example in physics of work which returns to work of 50 years earlier which was resuscitated, and using that work and taking up implications of that work to help solve a problem which had appeared in the present work.<sup>57</sup>

However, a field may lose its collective memory, and for example, citations more than 30 years old may be discouraged by journal referees. Lessons from the past are lost. For example, the work of Thorndike (1920s) has now been largely rejected in education, but he made the useful observations on practice. This is one example of thought in pre-1980 theory being lost.

#### **4.4 By which process and under what conditions do old and new theories come to a synthesis?**

Enquiry, science, and the concepts which make up a field often develop through a process of synthesis of existing work, of bringing together apparently disparate, existing concepts and fields – there are numerous examples of this. (Toulmin 1972) The question arises, *How might such helpful work be understood and encouraged?* Perhaps first, and as condition for this work to begin, the field needs to acknowledge that there is room for two approaches to the same general problem. Perhaps, for example, the field might concede that different aspects of the same general problem require different theories, because they have a surface similarity but are in fact addressing different problems?

Another condition or entry point for work of synthesis may be to concede that each theory, while addressing (apparently) the same problem, is in fact addressing separate sub-questions within the problem, and at times claiming too much, encroaching on a sub-section or aspect of the problem which the other field is better equipped to investigate and understand. For this reason a theory should make it clear: what question it is addressing; what its scope is; what specific problem it is starting from; what its endpoint is; - and so delimiting itself by specifying which part of that problem it is addressing.

If the new theory can demarcate itself from the old in being clear about its *scope* then (to recapitulate) a synthesis will be easier, as it can be seen which territory the old and new can each claim. If each can explain or account for what the other cannot, then again, there is room for both. In these ways, synthesis is achieved through demarcation, rather than a genuine and full synthesis. But (and again to recapitulate) a condition for doing this work is that the main problem in a field is seen to be, in fact, many problems. So, an old theory may be improved by reducing the scope of application for a claim which it makes, and then it is more easily seen where the old and new are applicable. In this way, the new theory is not, in reality, in competition with the old theory, but tries to find room for it.

#### **4.5 Implications for TEFL: the neglect of theory which addresses the learner's problems**

If a theory requires a clear problem as its starting point, we need to start from the question, What is our base problem in understanding in EFL learning? What are we trying to understand – as a teacher, I decided that the base problem was *the learner's problem* as he/she, individually, absorbs

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<sup>57</sup> Hoffman, Banesh (1959), The strange story of the quantum, Penguin. Pages 13-69 are excellent as a case-study description (by an insider scientist, but written for the non-scientist) of how a field develops.

the second language to his first.

Post-1980 thought in TEFL/TESOL, drawing from social understandings of language, has arguably neglected the individual learner, who was at the centre of understandings of learning pre-1980. This is disastrous for TEFL, as leads to a treatment of EFL learning which must be incomplete, in that it neglects the learner's learning problems. Further, it takes us further away from developing a theory of pedagogy, and which according to mainstream education, cannot be formulated without first understanding learning. In this sense, post-1980 thinking is a regression from the past, but if the best of pre-and post-1980 thought and practice were combined in a synthesis, then we might have a more complete understanding of language learning. There is nothing in pre-1980 thought which denies post-1980 contributions, and so the way is, perhaps, open for a synthesis of the two.

The word 'synthesis' itself perhaps requires analysis. The kind of 'synthesis' which TEFL/TESOL requires, at this stage in its development, and on the ground, is perhaps not a major synthesis (in the sense that the Copernican-Newtonian revolution brought physics and astronomy together into one understanding) but rather an eclectic approach where post- and pre-1980 thought and practice simply find room for each other. This perhaps already happens in many classrooms, but without work in the academy on how the individual learns, those fruitful lines of enquiry which were cut off in about 1980 cannot be followed up.

A genuine 'synthesis' which TEFL/TESOL may be able to achieve is, I suggest, one which would focus on and lead to a better appreciation of learning, *by the individual learner*. This synthesis was not made at the end of the pre-1980 era, as this movement did not develop to fruition, but was eclipsed (arguably) because of the introduction of the socio-communicative movement after 1980 and the diversion of resources to that movement. But a unified theory of second language learning might be possible through combining insights from: Chomsky on cognition in language learning; from contrastive linguistics; from educational psychology (especially as it studies first -language learning); and from learning theory using constructivist and schema theory, (as exemplified in mathematics education).

These strands might be combined with work in the philosophy of science which distinguishes between psychological and logical aspects of enquiry, and which enquires into how knowledge (and learning by a field) develops, this together with that work of Dewey which argues there is a unity between learning and enquiry, both proceeding in an 'experimental' way. I have tried to work towards such a synthesis in my own work in *Radical TEFL*. With this article I conclude my work in *Radical TEFL* with the message – we need to *look again*, and look more perceptively, employing more thought, at our subject matter.

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## Coda

It is interesting to observe that, while pre-1770 phlogiston theory was not, at first sight, combined with post-1770 work in a synthesis, yet a closer look at those theories may show that they had a significant and deeply-rooted feature in common and which was preserved during the apparent break from pre-1770 to post-1770 chemistry. They both understood chemistry to be about transformations, and change: a metal does change when burned – but the metal *gains* weight (from oxygen) and does not *lose* weight, as supposed by the phlogiston theory.

Lavoisier's re-conceptualisation of chemistry allowed chemical transformations to be given a coherent language, involving clearly expressed chemical reactions, and which is still taught in schools. Although Lavoisier demolished the phlogiston theory, he used many of the empirical findings in pre-1770 chemistry, and gave those fragments a coherent conceptual framework which

they previously lacked. It may be that, learning from this, any critique of post-1980 thought should look carefully for what that theory and pre-1980 work have in common, at a deep level.

A problem with new thinking (as with new toys) is that the baby is often thrown out with the bath water.<sup>58</sup> My teaching career started at the end of the pre-1980 era, and I was able to compare the leading ideas of that era with post-1980 thought. For me, post-1980 work did not take account of problems which pre-1980 work was perhaps on the way to solving.

If learning to speak a second language, in common with chemistry, is about processes of transformation, and about interactions – by individual students, as they move from their first language to a second language – is it not these processes and interactions that we require to investigate, see, and understand, in order to better understand the nature of second language learning, and understand how second languages are learned?<sup>59</sup> How can pre-1980 work help us here? From which other fields might we find insights? On the last pages of this *Radical TEFL* suggestions are made for projects for further work.

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### **ABOUT THE AUTHOR**

I studied Physics, Chemistry and The History and Philosophy of Science, graduated in Philosophy, taught Mathematics in secondary schools in England and secondary EFL in Poland, and also worked with pre-service and in-service EFL teachers, giving many workshops for the British Council, especially in Belgium, as well as specialising in short course ESP teaching. I lived and taught in Poland for 20 years, and edited *The Polish Teacher Trainer* (1993-95) and *Radical TEFL* (2014-2020). I taught *Theory of Knowledge (TOK)* for the International Baccalaureate (IB) Diploma, in Poland (2009-2011). I am looking for further short-term teaching opportunities. (Alistair Maclean)

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<sup>58</sup> Pointed out by Michael Swan in papers published in 1982. These can be read in his collection of articles, Swan M, (2012: Papers 1 & 2), Thinking about Language Teaching: Selected Articles 1982-2011, Oxford. This book – if no other – should be in every language school and TEFL library.

<sup>59</sup> In my (2020), in this issue of *Radical TEFL*, Learning to speak EFL as a form of enquiry, *Radical TEFL*, **6**, I argue, as a hypothesis, that learning EFL has many similarities with scientific enquiry. This idea is taken from John Dewey. How this process might be investigated, and that idea scrutinised, is another question. I have offered entry points for understanding EFL learning and how the EFL learner sees language in my(2018), Getting inside the EFL learner's standpoint and learning problems, *Radical TEFL*, **5**; and in my (2019), What is the English language from the the EFL learner's standpoint?, *Radical TEFL*, **6**. Both are available as a free download at <http://radicaltefl.weebly.com>



## PRAGMATISM AND RELATED WORK IN THOUGHT AND PHILOSOPHY AS ENTRY POINTS FOR UNDERSTANDING SECOND LANGUAGE LEARNING

Alistair L. Maclean

**INTRODUCTION** “Pragmatism” is often understood as an approach to practice and enquiry which focuses on “what works” rather than drawing from a theory, and for this reason pragmatism is sometimes dismissed as a serious contender for organising enquiry. However, pragmatism was the pre-dominant philosophy in the USA for several decades, and can be understood as a development of many earlier ideas in philosophy. Pragmatism has had an important influence on enquiry which is concerned with practice, but as with many ideas from philosophy and thought it has entered our ways of thinking under the surface, unnoticed and unappreciated as it were.

The roots of pragmatism are not simple, but the better they can be seen, and brought out into the open, the better we might see the possibilities of pragmatism for enquiry, and in particular, for enquiry which tries to link theory and practice in language teaching. This essay attempts that work, and argues that pragmatism can help teachers better understand language learning, developing ideas introduced in my (2015) and (2017). In the article “she” refers to the teacher and “he” to the student. A summary of the article is given after the main text and before the bibliography. With this article I conclude my work for *Radical TEFL*.

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### SECTION 1 SOME KEY IDEAS UNDERLYING PRAGMATISM

**(1.1)** I briefly introduce here the concept of “pragmatism”, which is a theory of understanding or meaning, and which was worked out in the USA (about 1870-1930). Section (2) will expand on this summary, delving into the philosophical roots of pragmatism. Section (3) explores implications for teacher research.

Influences which form the historical context and foundations of pragmatism can be summarised:

2. The whole context of knowledge, and of what it means to know, was changing in the late nineteenth century. The possibility of certain knowledge was being questioned;
3. At the same time, pragmatism had roots in evolutionary theory - that thought, enquiry and learning are all moving forward, and require to be understood as process, not static, or fixed. This way of conceiving the growth of knowledge and of understanding allows adjustment of beliefs and of claims to knowledge, according to experience, and allows ideas to have a dynamic life, and not to be fixed. An implication is that “truth is not out there”, but evolves.
4. Pragmatism can be understood as an ethical contribution to thought, a way of addressing social and personal problems. Late twentieth-century thought is mostly secular, but early in the century, in the USA, an influential protestant element in thought argued “By your fruits you shall be known – works not faith”. This is expanded in points (4) and (5) below, and in (2.8) below....
5. ... Especially in late 19c. USA, there was an influential climate of thought which rejected the primacy of “belief” and instead focused rather on action, especially helpful action which “works”, and which helped others. Enquiry, it was argued, when applied to practical fields,

should not be a search for what was true, but for what works and helps – just as practical fields had always known - and in this sense pragmatism was not a new idea.

6. Pragmatism also had roots in thought, and in the question of what it is for an idea, or claim, to have a meaning. Pragmatism advocated - concerning the meaning of an idea or concept or knowledge claim - “*look to the consequences of your claim in results obtained, in practice, and evaluate your belief accordingly*”. This injunction can be called the pragmatic principle.

The link to the social and ethical value of pragmatism is clear – it is a theory of understanding about *implications*, which can be used to address practical problems and to help improve people's lives, offering them a framework to work on their local problems. In this way pragmatism is ideally suited for work in the social sciences (including education), and especially where there is a concern to find solutions to people's problems, rather than deeper understanding. In a deep but constructive sense pragmatism is an anti-intellectual approach to a field or problem, a tendency against the hegemony of theory. Pragmatism, we see, is an idea developed by and belonging to philosophy - but very interestingly, also with influences from protestant thought (2.8 below).

It will be faithful to the spirit of pragmatism if we try to explain it further by looking at a practical example – by describing one of its *implications* in helping people with their personal problems, which is a practical success story of pragmatism, and which also takes us into the “can-do” spirit of the USA of the 1930s (which was very strongly influenced by pragmatism) ...

### **(1.2) An example of pragmatism at work: helping recovery from dependencies**

In the 1930s, the founders of Alcoholics Anonymous (AA, the original “12-step” movement which addressed dependencies) were strongly influenced by William James, and his emphasis on action and solutions to practical problems rather than on the thinking behind action. Linking this influence with others (mainly from religion) the AA founders made several “suggestions” to alcoholics who wanted to get well, who were encouraged *to* put into practice those ideas in their attempt to recover (or go into remission) from their alcohol dependency. These suggestions often *worked* whereas other attempts based on theories in psychology had relatively little success.

An interesting feature of the AA movement is that it offers no explanation or theory to account for its success, and that AA members are not required to believe in anything – but they are encouraged *to act*. Especially, they are encouraged to attend AA meetings, to talk about their lives, to listen to AA offers an accessible solution centred on action, not thought.<sup>60</sup> It is an anti-“fixed knowledge” movement. Although it has many of the features of a religion, there is no theory or dogma to follow or to refer to. AA members learn from, and imitate, the *actions and examples* of those for whom it has worked. Members are discouraged from asking why the suggestions work, and instead, they are encouraged to focus on their own practice, and examine their ways of living.

For example, it is suggested by the movement that a *interactive* relationship with a “Higher Power will be helpful, and will work, but members are encouraged to have their own conception of “Higher Power”: the concept is not defined for them, nor fixed in any way, but is created or made by individuals. An individual member's understanding of what it means to live without alcohol is created or made by individuals on their own journey, working out their own understanding. Members also work out their own reformed lives, by examining their actions, their relationships, and by self-examination – and changing their actions accordingly. We see the pragmatic principle (given above) at work here: “*look to the consequences of your claim in results obtained, in practice, and evaluate your belief accordingly*”.

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<sup>60</sup> For the history of the ideas behind the AA movement, see Katz, *Not God*, Hazledon Press (USA)

## SECTION 2 THE ROOTS OF PRAGMATISM

In section (1) the principles and the backgrounds to pragmatism were briefly introduced. However, those principles derive from and relate to other and earlier root work in philosophy, and although this work is often difficult (and frustrating) to follow, in my own experience the better one can understand that work the more options open up for linking pragmatism with practical problems which, for example, education and learning present. Some of the problems discussed within philosophy, and which have influenced work in pragmatism, are the following:

**(2.1)** The problem, identified and discussed in philosophy since Plato, that observation and sense perception is unreliable as a source of certain knowledge, because this data required to be mediated and interpreted by the mind; this work was developed by Kant who argued that the mind is structured in a way which mediates sense data; and following from this, Kant proposed that knowledge is made or constructed or synthesised by individual minds. (4.2 below)

Now, if learning is a “*coming-to-know*”, as proposed by John Dewey, then it might be profitable to follow up this idea of Kant's, that learning is a synthesis. The idea has indeed been followed up by 20c. educational theory of constructivism by Ernest von Glasersfeld, Richard Skemp (in mathematics education), and others. It was also followed up by gestalt learning theory. The kernel of this thought is that learning is an active, dynamic process.

**(2.2)** Thought from early 19c. German philosophy influenced the American pragmatists, and can be seen in ideas such as the insight that knowledge, far from being fixed and “out there”, grows in a dialectical, exploratory way. For early 19c. German thought, or *thinking*, (and by implication learning) proceeds in the form of a dialogue. The dialogue might be with oneself, as one learns a language, for example, trying out an idea to see if it works, rejecting the idea and so on, just as a scientist does as he explorer first one hypothesis and then another. It seems to follow that researchers and enquirers are *explorers*, using the same (perhaps subliminal) strategies as explorers, and this idea is found in Dewey where he applies it (in fragments) to learning, arguing that learning is a kind of enquiry, or a kind of journey.<sup>61</sup>

**(2.3) The pragmatic principle** C.S Peirce, an American logician, proposed that an idea's meaning was expressed by a set of hypothetical if/then statements which related the concept to experienced effects. This can be presented more simply by saying that the meaning of an idea or concept is found in its consequences, that is, *in action*. This gave practice a place when talking about ideas – philosophy was moved from the academic study to the field, or workshop. William James, taking up Peirce's idea wrote:

*“The pragmatic method (asks) what difference would it practically make to anyone if this notion rather than another were true?”* (1907: 17), and *“for pragmatism theories (are) instruments, not answers ...pragmatism sets (theories) to work ... always*

<sup>61</sup> Dewey (1919), *Essays in Experimental Logic*. University of Chicago/EMERO reprint. Esp. see: the Introduction sections I, II & III; also see chs. II (& ch. VI). Dewey, in this work, understands learning as a *process* which includes: guessing; classification of new information; reflection against other data; “*running over various ideas; developing new suggestions; comparing with one another*”, carrying out “*thought experiments*”; experimentation and trial and error; hunting for insights and for unifying principles; looking for analogy with what is already known; comparison; and abandoning attachment to an idea.(ibid: pp. 24, 43, 46 & 50). He also writes there (ibid), buried in the text, page 6, “*all knowledge involves reflection*”. It is interesting to follow up these insights in the context of trying to understand language learning, and failure to learn, and I have this in this issue of *Radical TEFL*, in *Learning to speak EFL as a form of enquiry*.

*appealing to particulars ... emphasising practical aspects ... (these are) anti-intellectual tendencies ... the attitude of looking towards ... fruits, consequences ... truth in our ideas means their power to work” (ibid: 19-21)*

John Dewey wrote:

*“If (an idea is) instrumental to a removal of some specific trouble and perplexity, then the test of (its) validity ... lies in accomplishing this work”*<sup>62</sup>

**(2.4)** From this, concepts and ideas can be seen differently – they no longer belong to the world of theory, but are *plans of action*. For pragmatism, an idea has no meaning unless action is proposed, in some conditional “if/then” form. There are clear implications for discussing the relationship between theory and practice in, for example, the study of second language learning, implying that a claim about language learning requires to state which conditions need to in place in order for the idea to apply.

**(2.5)** The above insights allowed philosophy to return to and 'dissolve' its age-old problem, “What is truth?” Philosophy influenced by pragmatism became (in the USA) less concerned with questions of truthfulness, which it seems to regard as a false trail, and more interested in the extent to which an idea of knowledge claim can be shown, in practice, to be helpful. This meshes well with other work in philosophy by for example by Karl Popper, which argues that all “knowledge” claims require to be regarded as provisional, and our problem in a given field is not to isolate some “truths” or arrive at certain knowledge, but rather to, more modestly, develop and employ methods for eliminating false knowledge claims. For this reason, pragmatism returns philosophy, and work influenced by philosophy, to issues and problems in methods of enquiry. Pragmatism, as I approach it here, is a study of enquiry.

**(2.6)** Finally, thought at the end of the 19<sup>th</sup> century was strongly influenced, and even undermined, by Darwin's theory of evolution, adding to the general uncertainty about the possibility of definite knowledge; Everything, including understanding in science, seemed to be *evolving*. (Croce 1995). It was in this uncertain climate that pragmatism flourished.

### **(2.7) Return to the pre-Socratic philosophers**

The above ideas seem to be linked around the idea that reality requires to be understood, and investigated, as a process. The idea that “all things are in flux”, or evolving, was introduced by the pre-Socratic philosopher Heraclitus, as a challenge to the idea that reality is fixed and eternal, and can be known. The idea, from philosophy, that reality develops and is continuous, has offered an entry point for studying living and evolving things and beings – which includes language, and the whole of biology and the eco-system.

It follows that, if for example learning a given second language for a given individual is a process, and so necessarily more complex than something which can be regarded as static, then compromises may need to be made in investigating the process, perhaps renouncing certainty, precision, quantification and statistical probabilities, in favour, perhaps, of a more general model of the process of language learning. Since Plato philosophy asked, unsuccessfully, “What is truth, what is certain knowledge?”. Pragmatism renounces this question, and asks instead, “What is helpful?”. By doing this, it introduced into philosophy, at a stroke, a genuinely ethical element,

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<sup>62</sup> John Dewey, *Reconstruction in Philosophy*, pp 156-57). See Talisse & Aikin (2008: 61; 65-69 & 72-73). For help on what ‘pragmatism’ is, see Talisse & Aikin (ibid: 1-3 & 7). Pragmatism can be understood as a ‘*philosophical methodology*’ (Talisse), which can be applied for example to teaching of individual school subjects, or to any form of practice.

concerned with helping individuals work through their local problems.

## **(2.8) The influence of protestant thought, and the reaction to secular thought**

From the time of the scientific revolution, Western thought became secular, and input and wisdom from religion and the natural world was lost. The “reign of quantity” eclipsed religion and nature, leading to a “disenchanted world”.<sup>63</sup> However, around 1920/1930, there was great interest (in the USA) in what religion could offer individuals and their problems, conditional on a person being pro-active. At the same time, other movements were examining the links between theory and practice, and examining how knowledge could relate to life. (Croce 1995)

Existentialism, for example, offered arguments which were often compatible with pragmatism, and which were taken into the AA movement (above), emphasising that a dependant drinker has a choice (today) whether to drink or not, and a choice whether to do work on his life and on his relationships – or not.

Pragmatism offers a theory of practice and of action – but action at a local and helpful level, perhaps beginning with oneself. This kind of reaction to pure thought is seen for example in recent work on the value of starting from personal experience in one's knowledge claims, and from the rejection of cold “objectivism” and “reductionism” in the social sciences. To understand a given field, such as education, as well as to understand the reaction against pure knowledge or “theory”, we require to bear those questions in mind.

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We can explore some further implications of the “pragmatic principle” - namely, to look for the practical consequences when making a knowledge claim, or employing an idea. The crux of the pragmatic principle is the assertion that, to understand an hypothesis, we only need to examine what conditionals can be derived from it: To restate the pragmatic principle: Peirce writes: “*In order to ascertain the meaning of an intellectual conception, one should consider what practical consequences might conceivably result*”<sup>64</sup> For example, the physicist's interest in forces rests upon the fact that they enable us to account for changes in motion. It can be argued, from this example, that it is in general, enough to know *what the effects of a belief (or idea) are*, and not necessary to penetrate to whether the concept of for example force, as in action at a distance, is “true” or not.

Following up this insight leads easily to Dewey's interest in pragmatism for solving local problems, and where the value of an idea lies in whether it has an application, whether it works in some way, and as a special case, whether the idea can be applied to a belief (or to work) which is designed to address a problem, which is the topic of the sections below.

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<sup>63</sup> See work for example by first-tier thinkers and scholars such as William Barrett, Lewis Mumford (*Technics and Civilisation*, and especially, *The Pentagon of Power*), John Dewey, Stephen Toulmin and many, many, others, who try to place current thought and assumptions in a wider context than work in second-tier social sciences and arts university departments are able to. Those cited writers possess perspective, and see their fields in a context, whereas academic thought, while filling journals, tends to be specific, narrow, often unaware of the broad context of the past – and is often bogged down and cluttered by theory and assumptions which are not scrutinised, nor otherwise linked to practice.

<sup>64</sup> Quoted by Hookway, C., (1985: 236), Peirce, RKP

## SECTION 3 IMPLICATIONS FOR UNDERSTANDING LANGUAGE LEARNING

### (3.1) Some implications for the relationship between theory and practice in TEFL/TESOL

To recapitulate - pragmatism is about implications. Pragmatism argues that when considering ideas or beliefs or other claims we should be looking for their effects, and not looking at the idea as stated: the pragmatic principle argues “*look for the consequences of an idea, not at the idea itself*”. It is the proposed consequences which require scrutinising, and not the idea, and from this it follows that those who propose theory for practitioners require to specify the consequences which follow, as well as specifying the conditions under which the consequences will follow.

This would allow a “theory” to be tested against its claimed consequences - but, however, without these specifications and conditions stated, the theory cannot be tested, or worse, it may be tested successfully under ideal conditions (for example, in small classes with teachers trained to use the theory), and the assumption then made that the theory will work under other conditions. A vague hypothesis, or one which does not specify under which local conditions it applies, is unhelpful, at least, to practitioners.

This mistake has arguably often been made in language learning theory, where ideas and proposals for teaching have not been anchored to a specific context, or set of conditions. To take one example,, in the debate about teaching a foreign language at an early age, the conditions under which it is being taught or learned require to be specified, otherwise a claim such as “languages are best learned before the age of 10” is unhelpful and misleading.

Since the pragmatic principle advises us to clarify our hypotheses or other beliefs or knowledge claims *by referring to their implications for practice*, this also implies that an hypothesis requires to be scrutinised through practice, as otherwise the hypothesis or claim cannot be mediated, corrected, developed. It also suggests that in order for an hypothesis, or other knowledge claim, to be progressively narrowed down or clarified, or its scope perhaps delimited or conditions under which it applies reconsidered, or works, then the hypothesis must be stated as clearly as possible, allowing it to be later amended. This follows from the 'pragmatic principle'.

### (3.2) Implications for teacher investigation of second language learning

'Pragmatism', as explored in the USA, argues that the meaning of an idea, or concept, or knowledge claim, is to be found in its consequences for practice (above) . A sub-division, or special case, of this insight was encapsulated by Dewey: “*“If (an idea is) instrumental to a removal of some specific trouble and perplexity, then the test of (its) validity ... lies in accomplishing this work”*”<sup>65</sup>

Now, a classroom is a problem situation for a teacher, and learning by an individual is for him a problem situation, as he works through difficulties. Anyone who has taught in a large secondary class will know that success depends on solving the many mostly-practical problems faced. Both teacher and learner are searching for what will move them away from their problematic situations, and towards a working solution, or resolution. Generally speaking, or at least, to start with, when practitioners, including teachers, find a solution to a problem met in practice, the practitioner does not probe deeper, or ask why the solution worked. Practitioners ask themselves “what” and “how to” questions, and not “why” questions.

Although it may be objected that this is an anti-theory and anti-reflective approach to the work of

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<sup>65</sup> John Dewey (1020: 142-47), in Reconstruction in Philosophy. I explore implications of this idea for TEFL/TESOL in my (2015) and )2017).

teaching and learning, and so should be discouraged, however, a classroom works in real time, and reflection belongs to a later and calmer moment, perhaps during a master's course. A teacher or student (or other practitioner) is in the first instance looking for what works, and not for deeper understanding.

### **(3.3) How does knowledge in a practical field grow? Evidence from the history of crafts**

It will help here to broaden this exploration by asking: “*How does knowledge in a practical field grow?*” and: “*What can second-language learning and teaching studies learn from how practical fields grow?*”, those questions assuming that teaching is, at least partly, a practical field, with similarities to early crafts and industries (such as navigation, dyeing and steam-engine design) in the way that teaching learns and develops.

(It may be objected that teaching is a “profession”, and not a practical field or craft, and should establish its “professional” status by giving theory from outside fields, or source disciplines, a high status. This position was argued for by Henry Widdowson (2003), in my view unconvincingly, and apparently unaware of work in education on the relationship between theory and practice by for example Wilfred Carr, and also unaware of other relevant work on methods of enquiry.<sup>66</sup> I have argued, following David Carr (Moray House, Edinburgh) against a “source-disciplined” view of teaching in my (2015: Part 1), and in my (2016: Part 1), *What is Teaching Speaking?, Radical TEFL*, 3, where I argue, drawing on work in education, that teaching can be conceived as craft).

We may return to the question posed in the paragraph before last. One person who investigated the question of how knowledge grows and develops in practical fields or crafts was Sir William Bragg (1925). Bragg concluded, from historical evidence, that success in a practical field (before the field is transformed by input from science and technology) comes after many *failures*, and “*success is the result of experience in actual use*”. Also, what worked well at one time is displaced by something that is *better adapted*. In other words, Bragg concludes, the practitioner of a craft looks for and keeps *what works* for him. For Bragg, “*advances have all been made, until recently, by the simple methods of trial and error*”. For Stephen Toulmin also (1990: 29-36; 70-83 & 168-193), methods of “trialling” and “putting to the test” were the ways in which fields developed before the scientific revolution.

Bragg was a physicist, but his conclusions are the same as those drawn by professional students of the history of crafts and technologies. Practical fields (crafts and technologies), the evidence shows, develop in a largely trial-and-error, or “trialling”, or “putting-to-the-test”, experimental way. However, the evidence also shows, where theoretical knowledge becomes available and is relevant to the problems which a practitioner is working on, then the practitioner will benefit by making use of that understanding. An early example of this development of a field was the introduction of technology into navigation.<sup>67</sup> But the technology requires to prove itself, and when technology has been introduced into language teaching (for example, language laboratories in secondary schools),

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<sup>66</sup> The article by Henry Widdowson is *The Theory of Practice*, in *Defining Issues in Language Teaching*, (2003) CUP. See, for a more probing and considered treatment of the relationship between theory and practice for a teacher, the book by Carr, Wilfred. (1995), *For Education: Towards Critical Educational Inquiry*, Open University Press. Chs. 1 & 2, which are reprints of Carr, W. (1980), *The Gap between Theory and Practice*, *Journal of Further and Higher Education*, 4/1; and Carr, W. (1986), *Theories of Theory and Practice*, *Journal of Philosophy of Education*, 20/2.

<sup>67</sup> I have reported on work which investigates this in my “*How practical fields develop*”, in this issue of *Radical TEFL*, where I offer an historical survey of how practical fields develop, drawing mostly on work collected and edited by the historian of technology Charles Singer (1956-1958, and full citations are given in that article). Also see Mumford, Lewis (1934), *Technics and Civilisation*, Routledge

the technology has not always been helpful.

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Teachers are arguably ideally placed to search for *what works*, as the pragmatists describe, using “trial and error”, to carry out informal experimentation – returning us to the original pre-scientific revolution conception of “experiment” as “trialling”, or “putting to the test” (Toulmin 1990), just as a craftsperson in a workshop does when no relevant theory is available. Moreover, teachers have many advantages over more formal researcher-observers: they have time and opportunities to try things out; they are relatively free to work on their own; and they can backtrack and abandon their ideas, even in the course of a single lesson, because they often receive instant feedback as to whether their interventions have worked.<sup>68</sup>

The case can be put for a model of building knowledge about TEFL (by the individual teacher), centred on using a pragmatic model of *searching for what works*, and eliminating ideas which do not work, in the local situation. Just as innovative or open-minded craft-practitioners do, teachers may also test out ideas proposed by the academy in order to systematically find what works, and *under which conditions*, and this idea was proposed by the founder of teacher research in the UK, Lawrence Stenhouse (1975) (although not taken up by TEFL, as his ideas were eclipsed by the action research movement, which derived from arguably flawed “critical theory”, in the more influential work of Wilfred Carr and Stephen Kemmis).

Stenhouse argued, consistent with the pragmatic principle, that claims about what works in the classroom can and should be scrutinised for their utility, and that teachers are ideally placed to do this work.<sup>69</sup> For Stenhouse, a classroom can be conceived of as a 'laboratory'. We can develop this: a classroom is a resource, a source of information and insights, of disconfirmation of conventional or orthodox thinking about teaching. Both Dewey and Stenhouse propose a method of enquiry which is less interested in proposing new theory, and more interested in probing and challenging existing theory. As proposed above, teachers are well-placed to do this work, if encouraged and perhaps rewarded. How can this be done?

### **(3.4) A programme to encourage and take account of teacher feedback from the classroom**

In *Radical TEFL*, I have invited teachers to report on their work in the pragmatic sense outlined above. However, leaving aside this attempt, an organisational framework is arguably lacking, for teachers to report on their work in the sense proposed above. Why should this be? The academy (which often referees publications) may regard a pragmatic approach as lacking rigour. Interestingly, in the UK, pragmatism was dismissed out of hand by the philosophy establishment, while they focused on the “search for certainty”, and which both American and German philosophy had long ago regarded a misconceived project. Second, there is sometimes pressure from examiners for work to start from with a given theory - but the search for what works is a different approach – it is, in a deep sense, an anti-theory approach. It believes that, for teachers, the search for theory about teachers is a misguided approach. (Carr, W. 2006, *Education without Theory*).

Further, teachers who publish may be asked, by their supervisors, to work within a mathematical-statistical-reductionist paradigm, which worked for Galileo, Newton, and so on, during the “reign of

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<sup>68</sup> I have explored this question in my (2017), *Re-conceiving teacher research* ....

<sup>69</sup> Stenhouse's key ideas (mostly neglected in TEFL/TESOL, and difficult to find) can be found in: Ruddock, Jean & Hopkins, D., (eds)(1985). The Carr and Kemmis work on teacher research (1986), *Becoming Critical*, is well known, but in this writer's opinion, it is fundamentally flawed (especially the central chapter 4).



quantity”, but which cannot arguably be applied under the conditions of learning. Or, the teacher-researcher may be permitted to use an ethnographical, or diary, or narrative format, and where it is often difficult for others to know what problem is being addressed, or what is being claimed.<sup>70</sup>

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We return to the objection that such pragmatic work lacks rigour, and that “trial-and-error” is a primitive way of advancing understanding. My replies are as follows:

4. first, “trial-and-error” *is how science develops*, although “trial-and-error” is described as “hypothesis-and-scrutiny, leading to refutation or refinement of the hypothesis”.<sup>71</sup> But “science” is often misunderstood, and ‘science’ and ‘experimenting’ has a bad name amongst students of literature and language, which is often the main background of language teachers. Scientific method, in the sense I use it (with Dewey) is simply a self-correcting method for proposing provisional claims to knowledge, in any field (for example, including history, and it is in this sense that the word science – *wissenschaft* or knowledge creation – is used in the German-speaking world). A strength of scientific method is that it is able to detect false trails in knowledge building, including ideology – science can protect us against ideology, and much thinking in present-day TEFL is arguably ideological.
5. If teaching is a practical enterprise rather than a theoretical one, it may have much to learn from how practical fields develop – and they also develop by trial and error, at least, where helpful theory or principles have not been developed.<sup>72</sup>
6. The pragmatic principle is by no means an ad-hoc device, but rests upon a tradition in philosophy which I have outlined above;
7. The pragmatic way of working meshes well with continuous teacher development, where teachers work in a principled way to develop their practice, and through reflection (outside the classroom), develop understanding of why their practice worked, and extrapolate that successful practice to other and similar situations. It is in this way that crafts-people work – but the working of crafts has been relegated to a second tier since the ancient Greeks, and the academy still claims priority. A brilliant survey of this problem is given in Dewey’s (1929) *Quest for Certainty*, in the opening chapter.

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#### **(4) SECTION 4**

##### **THE WORK AND RELEVANCE OF PHILOSOPHY**

Until now work in philosophy has not generally been considered as a possible source for second language learning studies.. This may be because of the difficulties (and wrong turnings) of philosophy; and because professional students of language learning rarely have a background in philosophy, with the required training. Other fields, however, have drawn on philosophy and found it helpful, and have established branches in their fields which employ thinking from philosophy. Philosophy offers a perhaps inexhaustible source of insights for other fields, at a deep level, if only

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<sup>70</sup> See work by Martyn Hammersley critiquing qualitative/ethnographical approaches, Hammersley, M (1990), *Classroom Ethnography*, ch. 6; & esp. ch. 7, Open University Press; and Hammersley, M & Atkinson, P. (1983, 2007 3<sup>rd</sup> ed.), *Ethnography: Principles in Practice*, Routledge, see chs. 1 & 2, & Epilogue. Or see his (1989), *The Dilemma of Qualitative Method: Herbert Blumer and the Chicago School*. Routledge. esp.: pp. 4; 71-87; 137-54 & 207-15.

<sup>71</sup> Popper (1994) or (1999).

<sup>72</sup> My (2020) *How practical fields develop*, in this issue of *Radical TEFL*.

the connections can be made.

The work of “philosophy”, in the sense that I use that word here, is to explore and probe the foundations of knowledge, as well as the problems and traps, and opportunities and paths, for making knowledge claims. Since all fields make knowledge claims, some appreciation of what philosophy can offer is therefore relevant. The essay here has argued that pragmatism, belonging to philosophy, can offer many insights to understanding second language learning. Some other areas in which philosophy might be applied to understanding second-language learning are:

**(4.1) Philosophy explores underlying and root problems in methods of enquiry**, and the branch of philosophy which explores issues in the growth of knowledge is directly relevant to all investigators or researchers. An enquirer may not be aware of many of the problems and traps in enquiry, as identified by philosophy, but those problems will lurk under the surface, ready to invalidate his work, and his conclusions. Work in second language learning studies on research methods may think it has this problem covered, by focusing on technical issues of validation and reliability,<sup>73</sup> but if deeper issues are neglected, technically 'correct' research may rest on insecure foundations. Karl Popper, a blunt man, observed that most claims to knowledge rest on 'a swamp'.

**(4.2) Problems of standpoint and seeing:** How reliable are conclusions drawn from observations and sense data? This question has nagged western thought since the time of Plato, and in recent decades has influenced work on methods of enquiry in the social sciences, with discussion for example on the standpoint of the observer. One aspect of the the problem can be put as follows: “Since sense impressions require to be interpreted or mediated by the mind, and since we do not know what biases, or prior knowledge, or assumptions the mind might apply in interpreting the incoming data, then how can we trust such interpretations?” Kant moved the problem forward by asking, what does a person *bring* to his new input? Is learning a synthesis of the new and the old, by the individual? How, then, can it be “objective”? Dewey added, what indeed is learning, or 'coming-to-know'?

These questions have implications both for understanding learning, as well as for understanding enquiry. I explore some aspects of the problem in this issue of *Radical TEFL* in (2020), *Problems of standpoint and seeing in enquiry into second language learning*, taking as a entry point Wittgenstein's observation, “The meaning of the world delivers itself to the right kind of looking”. If we are looking at a problem in the wrong way, or in the wrong place (or have misconceived our problem), we will neither see our problem, nor ways to address it, in a clear way. It is in this kind of way that philosophy can be helpful.

**(4.3) Philosophy is not only a critical enterprise, but has many positive suggestions to make to enquirers and researchers:** for example

- a) the need for thought and empiricism to work together;
- b) the value of hypotheses;
- c) a tradition of paying attention to processes, and of advising fields not to be distracted by the easier work of enquiring into what is static and most-easily observable;
- d) philosophy links up with history, arguing that to understand a field it is important to understand its development, or genesis, or history; similarly, for a knowledge claim, it is important to understand its history, origin, or genesis; (Toulmin 1963)
- e) uses doubt and reason as foundations in thought, while at the same time combining these strategies with an understanding (rather than a criticism) of where others ran

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<sup>73</sup> For example, Dornyei, Z (2007), *Research Methods in Applied Linguistics*. OUP. This book appears to be thorough, but underneath the technical and reductionist presentation there is little apparent awareness of deeper methodological issues, pitfalls and problems in carrying out and evaluating educational research.

- into difficulties;
- f) a field can, with the help of workers trained in philosophy, pay attention to and analyse (in conceptual analysis) the words it uses, and to the specific ways in which they are used;
- g) philosophy can help a field to select probing questions which will allow it to re-examine its claims; and
- h) philosophy can help a field to unearth, identify and challenge its assumptions;
- i) can bring together, using argument, apparently unrelated ideas or information into a synthesis, leading to new understanding.

One approach to understanding philosophy is that its most useful work is as a method or tool to help other fields, as mathematics does. These tools are centred on asking questions. Once philosophy proposes answers, it becomes a new field. From this, we see that it is not a role of philosophy to, itself, collect information through enquiry. Its role is to be awkward, and disturb, to wake others from their slumber and from groupthink. For this reason philosopher is not always appreciated by those who believe that their fields are already on secure foundations - but it identifies problems with such assumptions, and the problems it points out do not go away. Philosophy's work is to undermine the claims of other fields to knowledge – because these claims are often insecure.

Young fields such as second language studies, perhaps still at the stage of formulating good questions, may find much that is helpful in philosophy, and this essay has been a plea for a place for philosophy in second language studies. The project of philosophy is argued for by Karl Popper (1994, or 1999), and specifically in education, by Richard Pring (2004, or 2007).

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#### **About the author, and acknowledgements**

Alistair Maclean graduated in philosophy and taught TEFL for 30 years. He hopes that he has now repaid his debt to TEFL, and to his teachers and what they gave him. Throughout this project I have had in mind my debt to my teacher of Philosophy at the University of Sheffield in the 1970s, Professor Peter .H. Nidditch.

***RADICAL TEFL, 7, March 2019***

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## SUMMARY OF THE ARTICLE

“Pragmatism” is a theory of meaning (developed by philosophy in the USA) which argues that an idea or knowledge claim should be evaluated according to its consequences for practice. Since second language learning and teaching is a practical field, influenced by theory from language studies and other source disciplines, it may be that pragmatism can help us make links between academic theory and classroom practice, allowing ideas from the academy to be tested in the classroom, according to their consequences.

Teachers are well-equipped to trial ideas in this way, as well as trialling their own insights on language learning, to find out if an idea or claim about language learning *works* in the classroom, and under *which conditions* it works. This essay presents an argument for encouraging to teachers to do this work (section 3) . Drawing on a concept of teacher research by Lawrence Stenhouse, a role for teachers is argued for, with them developing theories about second language teaching and learning, anchored to local problems and conditions.

Pragmatism has deep roots in earlier work in philosophy (section 2), and a broader argument of the article is that work on understanding second language learning might pay more attention to this work and and to other work in philosophy, for example, work on methods of enquiry; on problems in making claims to knowledge; on problems of standpoint in investigating learning; and on employing other methods and tools from philosophy, such as conceptual analysis. In this way, a programme of work for second language studies is sketched, drawing on philosophy (section 4).

The article is part of a larger project by to explore implications for understanding second language learning, drawing on work by John Dewey, which itself builds on, for education, Kant's constructivist theory of understanding, and in that context this article develops earlier work by the author: (2015) *How can a Teacher grow her Knowledge?*; and (2017) *Re-conceiving teacher research with the help of John Dewey's theory of enquiry*; and other articles all available on the *Radical TEFL* website.

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***RADICAL TEFL, 7, March 2019***

# CONCLUDING POSTSCRIPT:

## *RADICAL TEFL AS AN EXERCISE IN DRAWING ON PHILOSOPHY TO DEVELOP UNDERSTANDINGS OF SECOND LANGUAGE LEARNING*<sup>74</sup>

Alistair L. Maclean

**The function and value of philosophy** What is the function of philosophy, and what can philosophy offer a study of TEFL/TESOL and second language learning studies? Philosophy is at its best when it modestly, like applied mathematics, sees itself as a tool or instrument to help solve problems in other fields. Philosophy, in this sense, is like a tool box. The tools can get under the surface of a problem, can analyse a problem (rather than seek fresh data), can offer fresh perspectives for understanding a problem. For example, the branch of philosophy which studies methods of enquiry can identify problems in enquiry.

Philosophy, understood in this way, restricts itself to raising questions and pointing out problems in making knowledge claims in a given field, and does not claim answers. When it proposes theory or answers it is no longer philosophy, but a new field, and the history of many fields is that they started out as 'philosophy' and then matured into an academic field. However, if a field loses contact with its questioning and self-critical aspects, it can fall into all kinds of errors -and needs philosophy again.

This retrospect of my work for *Radical TEFL* identifies several of the tools which philosophy offers, and indicates where I have used them. My work has been an attempt to apply philosophy to problems of understanding the pedagogy of TEFL/TESOL, and of the learning of second languages, and of problems in enquiry which tries to understand second language learning.

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What can philosophy offer an enquirer in any field, and specifically, in our field which tries to understand second language learning and teaching?

### **Scrutiny and analysis of concepts**

Philosophy points out that concepts (for example, 'learning', or 'teaching') require close scrutiny, because words can 'bewitch' and deceive us, encouraging us to think that we understand more than we do. Work built on such incomplete understanding must be insecure. In my *What is teaching speaking*<sup>75</sup> I have explored the concept of 'teaching', and in my *How can one investigate an educational concept?* I explore in a general way how one can investigate an educational concept.<sup>76</sup>

### **Concepts should not be studied in isolation**

Developing the need for scrutiny of concepts, philosophy also argues that concepts require to be understood in their relationship or connection with other concepts. Historical evidence reveals that concepts are abandoned, evolve, are created, and merge to form hybrid concepts as a field evolves, and this is explored in *Enquiry as re-conceptualisation*<sup>77</sup>. Also, in *What is teaching speaking*<sup>78</sup>,

<sup>74</sup> My work in *Radical TEFL*, cited in footnotes, is all available as a free download on the *Radical TEFL* website, at <http://radicaltefl.weebly.com>. I am very grateful to Dr. Richard Smith (University of Warwick) for creating and updating this website.

<sup>75</sup> *Radical TEFL*, 3

<sup>76</sup> *Radical TEFL*, 3, e-version only, page 48

<sup>77</sup> *Radical TEFL*, 6

I have argued that pedagogy and materials perhaps require to be regarded as a hybrid concept. I argue throughout that pedagogy cannot be understood outside the context of understanding learning, and I relate this to the classroom in both *Pedagogy as handing over to the learner*<sup>79</sup> and in *What is teaching speaking*<sup>80</sup>.

### **Scrutiny and caution regarding of methods of enquiry and of ways of making claims to knowledge**

Philosophy has a branch which explores the ways in which claims to knowledge are made, and points out some traps in making such claims. There are many problems in making claims to knowledge which are based on observation and empirical studies, and what is often required, philosophy argues, is analysis and thought to complement such work, with the aim of exploring the limits of what can be claimed. Philosophy teaches that we require to be *cautious* in making claims to knowledge, and that our knowledge of the world is best regarded as only provisional. Philosophy encourages, in all of the above areas, questioning and probing, of all claims to certain knowledge, and of assumptions and conventional thinking. I have explored this theme in *How can a Teacher grow her Knowledge?*<sup>81</sup>; *Re-conceiving 'teacher research' with the help of John Dewey's theory of enquiry*.<sup>82</sup>; and in *How can applied linguistics understand TEFL?*<sup>83</sup>

### **The question of standpoint and of impediments to clear seeing**

Philosophy argues that an 'objective' standpoint to the subject matter of a field is often an illusion, again resulting in insecure claims to knowledge. Standpoint must be selected carefully. In the following I have taken the student's standpoint, and asked some questions on his behalf: *Getting inside the EFL learner's standpoint and learning problems*<sup>84</sup>; *What is the English language from the EFL learner's standpoint?*<sup>85</sup>; and *How does the EFL student see teaching?*<sup>86</sup>. In *Problems of standpoint and seeing in enquiry into second language learning*<sup>87</sup> I study the problems of standpoint from the perspective of an enquirer or researcher into second language learning.

### **Is knowledge 'objectively' fixed, or more relative and developed by the individual ?**

A further insight from philosophy has implications for how enquiry into second language is carried out. The pre-Socratic philosophers offered two entry points for understanding the world: the debate centred on the question: Is the world fixed, or is it developing? If it is developing and in flux (Heraclitus), that is, a *process*, then we require different enquiry methods than if it is fixed. Stephen Toulmin argued that we require to understand reality as a process, and I explored implications of this idea for enquiry into second language learning in *Enquiry as Re-conceptualisation*.<sup>88</sup> I also explored implications for understanding learning, where the learner makes his own knowledge and

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<sup>78</sup> Radical TEFL, **3**, Part 1 of that article.

<sup>79</sup> Radical TEFL, **7** (and that argument is developed in *Teaching academic writing: Pedagogy as anticipating and preventing problems*, also in *Radical TEFL*, **7**)

<sup>80</sup> Radical TEFL, **3**

<sup>81</sup> Radical TEFL, **2**.

<sup>82</sup> Radical TEFL, **5**.

<sup>83</sup> Radical TEFL, **5**

<sup>84</sup> Radical TEFL, **5**

<sup>85</sup> Radical TEFL, **6**

<sup>86</sup> Radical TEFL, **7**

<sup>87</sup> Radical TEFL, **7**

<sup>88</sup> Radical TEFL, **6**, Parts 2 & 3 of that article; and Toulmin, S., (1972) *Human Understanding Part 1*, Concluding section of that book.

understanding, over time, rather than taking over 'fixed knowledge'.<sup>89</sup>

This insight from philosophy (specifically, from epistemology) also leads to the conclusion that knowledge is made, or constructed in an ongoing process, rather than fixed. TEFL/TESOL currently draws strongly from language studies, but if learning is a “*coming to know*” (John Dewey's phrase), then we should take perhaps epistemology, the study of the grounds of knowledge, as our starting point and foundation for understanding learning, rather than language studies. I have tried to do this in my *Propositional knowledge, practical knowing, and learning to speak a second language*,<sup>90</sup> and in *John Dewey on 'knowledge' and learning*<sup>91</sup>, and also in *Two ways of understanding the growth of knowledge*<sup>92</sup>

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I have tried to apply these insights from philosophy in my work, sometimes in addressing specific problems, and also more generally as an underlying consideration. As I researched and wrote for *Radical TEFL*, I followed a parallel programme of reading in philosophy, and found John Dewey the most relevant thinker (followed closely by Karl Popper). In each article I have tried to get under the surface of our field, to better probe and ask questions, and at the same time with memories of my classes and students, and of what they taught me, in front of me.<sup>93</sup>

Although I intended my work as an exercise in applying philosophy to TEFL/TESOL and second language learning studies I did not emphasise, in the texts, the importance of philosophy to my work, as there is some misunderstanding about the function and aims of philosophy. Other fields have used similar tools to probe their subject matter and their enquiry methods, allowing them to move forward on more secure grounds, to scrutinise and self-critique their work and their claims. The branch of a field which does this work is normally called for example “The philosophy of science” or “The philosophy of education”.<sup>94</sup>

At the same time, and to make my attempt more ambitious and complex, in most of the articles I tried to take into account how work in mainstream education (especially in mathematics education) has tried to draw on insights from philosophy, drawing on my own teaching experience, often at the sharp end, in mathematics and EFL, which allowed me to see thought and theory in education working, or not working, at the chalk face. Without taking account of education and feedback from the classroom, the attempt to apply philosophy to TEFL would only have been theoretical, lacking both a practical dimension and a scrutiny component....

Throughout, I have been influenced by the insistence by Karl Popper that theory (in whatever field) requires to be open to scrutiny. A knowledge claim (or hypothesis or theory) may often be scrutinised through some kind of experiment or 'trialling', and the fictitious historian of technology Dr. Eisenstadt, in my *How practical fields develop, with implications for understanding the development of EFL teaching*<sup>95</sup> argues (based on historical evidence) that practical fields develop

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<sup>89</sup> Radical TEFL, **3**, *What is Teaching Speaking?* and *Pedagogical implications for TEFL of work in Mathematics Education deriving from schema theory*, Radical TEFL, **3**, Part 2 of the article

<sup>90</sup> Radical TEFL, **6**

<sup>91</sup> Radical TEFL, **3**, e-version only, page 60

<sup>92</sup> Radical TEFL, **4**, e-version only, Appendix A of *Re-conceiving teacher research with the help of John Dewey's theory of enquiry*, which is *Two ways of understanding the growth of knowledge*,

<sup>93</sup> Heidegger made the categoric statement “*In all teaching it is the teacher who learns the most*”

<sup>94</sup> On philosophy of education, see Pring, R. (2000, 2004a, 2<sup>nd</sup> ed.), *Philosophy of Educational Research*, Continuum. Chs. 1, 2 3 & 5, which is a basic text on issues in critically approaching educational research. For history, I have given citations in my *The study of EFLT histories*, Radical TEFL, **4**.

<sup>95</sup> Radical TEFL, **7**

through informal experimentation as much as by drawing from more formal experimental work in source their disciplines. This is an example where analysis or scrutiny of a word – in this case, the word “experiment” - can helpfully reveal that it has multiple, rich, meanings, each with implications.

In my first articles, *Why Radical TEFL?* and *The significance for TEFL of the work of Michael Swan* <sup>96</sup> I announced that it was the aim of *Radical TEFL* to found a new branch of TEFL, 'The philosophy of TEFL'. I had hoped that this work would be a joint venture with others, but that did not generally happen. An underlying premise has been that our field can only benefit from more thought and more analysis, and for which philosophy (carefully delimited) can supply the tools.

My work must often appear complex to readers, but this is inevitable, as I have tried to combine tools from philosophy – which are not always well known – with both education, and with practicalities, as *met in the classroom*, of helping learning. But I have tried to write as clearly as I can.

Two key entry points and conclusions to my work may be the following:

- if learning is a process of *knowing*, then we need to better understand what is meant by knowing, or coming to know. This position is argued for by the fictitious philosopher of science Professor Grunewald in this issue of *Radical TEFL*, in *Learning to speak EFL as a form of enquiry*. Grunewald proposes a theory of learning which does not start from language studies, or psychology, but from epistemology. This theory is an expansion of Dewey's insight that learning is a *coming to know*, so requiring an understanding of what it means to 'come to know'.
- a key aspect of knowing (and so of any enquiry) is the scrutiny stage following a knowledge claim, which allows erroneous claims to be reconsidered. <sup>97</sup> For both the second language learner, and for the enquirer into how second language learning takes place, that scrutiny can only take place on the ground – in the classroom.
- we need not only more analysis, but more scrutinising work and insights from teachers, to help us with the work of enriching our understanding of learning, especially in large classes. Other fields which claim to have practical implications (medicine, engineering ... ) regularly and systematically publish work from the laboratory or workshop, or from the field, and this work has the function of scrutinising theory. Our field lacks such a feedback loop.

At the moment, language studies and social studies provide most of the input for understanding language learning. There is room for and a need for other fields to contribute: work from mainstream education; from the history of how practical fields develop; and from philosophy. This suggestion, developed in *Suggestions for further work* (which follows overleaf) now concludes my work for *Radical TEFL*. I hope that my contribution to the field might offer starting points for others, working on their local practical problems of teaching, or working on theories of language learning and teaching.

December 2018

## ***Radical TEFL, 7, September 2019***

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<sup>96</sup> Both in *Radical TEFL*, 1.

<sup>97</sup> Popper, Karl, (1994, tr. 1999), *All life is problem solving*, paper 1, *The logic and evolution of scientific theory*, Routledge. This late paper (and the work below) clearly outlines his thinking on how knowledge grows: scrutiny acts as a check on knowledge claims. Or see Popper, Karl, (1994), ed. M.A. Notturmo, *The myth of the framework: In defence of science and rationality*, Routledge, esp. pp 58-59; 68-71; 74-75; 82-101 & 144-149



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# SUGGESTIONS FOR FURTHER WORK ON TEFL/TESOL

## On enquiry into the learning and teaching EFL

- A study of how the learner interacts with teaching materials. How far do materials direct learning, and perform the function of “teaching”?
- To what extent is teaching a craft (or art, or technology), and to what extent is it a field which applied insights from source disciplines? What are the various implications?
- What are the differences between teaching large and small classes, and what are the implications of those differences for theory design which leads to teaching materials?
- In a large class, either teacher or students are 'in control'. What is the significance and implications of the concept of 'control' for understanding both the classroom and learning?
- Can learning and “teaching” be studied separately from each other? Can a study of learning (or of language) without reference to pedagogical implications be helpful for teachers?
- Many more “reports from the classroom”, where teacher's record how they dealt with failures and problems, and with lessons learned.
- More reference and citations from mainstream education - and from the philosophy of education (eg, Richard Pring) where studies of methodological problems in investigating learning and the classroom have already been carried out.

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- A learner always finds himself in a *problematic situation*, with prior knowledge: what is the significance of this for understanding learning and the teacher's response to the situation?
- Do we require different theories of learning for different stages of learning?
- Is genuine learning as much about 'un-learning' as 'learning'? What is the influence on EFL learning of the first language (and of learning strategies learned when learning it) ?
- A return to studying the significance of the first language for EFL learning, for example, a closer look at historical work in contrastive linguistics (on histories, below)

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- What are the dangers and pitfalls in different kinds of enquiry into second language learning – for example, the dangers in mathematical treatment of data; problems of being clear about variables; problems or limitations of subjective or narrative approaches?
- If learning is a process, what can be learned from other fields (eg, chemical engineering) which investigate processes – can we borrow from such fields?
- At what stage in its historical development is the study of TEFL/TESOL, and what kind of work is required to move on? Do we need a theory which links learning, teaching, teaching materials and language studies? Is this premature? Do we first need more questions?

- In all such studies, *putting the learner's standpoint at the centre*, to gain fresh perspective. How can enquiry strategies and methods be designed which allow us to start from the learner's learning problems and standpoint?

### **On histories of learning and teaching EFL**

- A study of work in the 1970s and 1980s in pedagogy (before post-modern influences on TEFL), to look for helpful insights.
- Why did the Direct Method fall out of use - what happened, and what lessons can be learned? How does the Callan Method work (a direct method used in Poland), and what can be learned from it?
- How can pre-1980 traditions and post-1980 traditions be brought together into one, unified, understanding, drawing on the most helpful elements in both of them? How do other fields bring together different tendencies?
- How can we record our present history, with both teachers and learners as sources? A project to record what happens in EFL classrooms, using teacher and student sources.

### **Learning from educational psychology**

- What can work in other skill subjects on the conditions for practice teach us about EFL learning, and conditions for learning -with implications for designing practice work?
- Can elements of the now-taboo behaviourist school of learning be integrated into modern thinking on language learning? A re-reading of that work.
- What can work on first-language learning strategies teach us on understanding the learning of EFL?
- What other fields may have something to offer studies of EFL learning and teaching?

Alistair Maclean /

***Radical TEFL, 7, September 2019***

### **COMPETITION FOR ENGLISH TEACHERS**

No entries were received.

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