and the *Innenwelt* (the inner world), to use von Uexküll's (1926) terms.

These points concluded Sebeok and Danesi's treatment of primary, or primitive, modeling systems, those that spring from a sensory or perceptual apprehension of a thing. They then discussed the secondary and tertiary modeling of systems, the first entailing an elementary reference to a thing in an indexical manner, the second entailing a more advanced reference to a thing, i.e., in a symbolic manner. (A tertiary, or symbolic, reference is more advanced in the obvious sense that it is derived from the cultural environment, hence is chiefly the special province of humans (2000: 82ff).) As part of this discussion, Sebeok and Danesi took up the topic of what they called 'extension' (2000: 296ff), a process whereby a sign of the primary or iconic level of simple apprehension, for example, can be raised to a higher level. Thus, the word 'crash,' which as a crude imitation of a sound is by definition basically primary, becomes altogether raised to the tertiary or symbolic level when it is extended, losing any direct reference to sound as such, so as to occur in a sentence such as *His business has crashed*. (As was noted earlier, all imitative words such as 'crash' are already partly arbitrary, hence partly symbolic; Sebeok and Danesi's point is best elucidated by considering that, when extended upward, the imitative quality of all or almost all of such words can be bled out of them. The point is a delicate one, but it may be clarified by considering some words that are highly imitative, such as 'ding-dong' and 'bang,' next to some words that are much less so, if at all, such as 'bell' and 'blast.')

Signs originating at the tertiary level, though they are already arbitrary hence symbolic, can be extended **within** the tertiary level to become symbolic in some other sense. Thus the tertiary word 'blue,' which begins by referring simply to a color, can become symbolic in some extended sense – without, of course, becoming any more arbitrary – when transferred to the phrase 'blue movie,' in which 'blue' means 'pornographic.' (The association between 'blue,' referring to the color, and 'blue,' meaning 'pornographic,' apparently originated long ago, when jailed prostitutes were dressed in blue (cheaply dyed) uniforms, which they then wore when released back onto the streets to ply their trade anew (Roppolo, 1953).)

Though Sebeok and Danesi considered only 'upward' and 'sideward' extensions (e.g., primary to tertiary and tertiary to tertiary), their analysis can easily be amplified to include 'downward' extensions as well. Thus the word 'crash,' to take an example used earlier, after it has been divested of its imitative quality by being lodged in a sentence such as *His business crashed*, can be 'reprimarized,' so to speak,

regaining a little of its lost imitative character, by adding *and he had to hire a lawyer to pick up the pieces*. In any case, Sebeok and Danesi's discussion of extensionclarified a most intriguing problem, that of describing how signs originating in one Peircean paradigm can shift sideward within it or shift upward or downward into another.

Conclusion

In their summative final chapter, Sebeok and Danesi (2000: 158–189) looked back over their various schemata and, given the limitations of present knowledge about signs and signification, they invested them with fresh psychological import and made them available to empirical typological techniques. In so doing, they have redirected the emphasis of semiotic inquiry from the investigation of the logical nature of the sign–signified relationship to the study of semiosis, the **activity** through which sign becomes tied to signified. This redirection is nowhere better exemplified than in their definitions (2000: 161 ff) of semiosis as the "neurobiological capacity to produce [signs]" and of modeling as "the channeling of the semiotic activity towards ... the representation of some referent" (i.e., the representation of something to be signified by a sign that signifies it). So modeling, as they put the matter succinctly, "reveals how the brain carries out its work of transforming sensory forms of knowing into internal forms of thinking and external forms of representation," so that "a specific external model is thus considered to be a 'cognitive trace' to the form [that] a concept assumes in the mind." Given their classificatory schemata, their exposition, and their rich set of examples, Sebeok and Danesi have provided a principled means of categorizing signs and the activities that use and extend them so as to achieve an apperception of the world we sense by means of recasting that world as the signs by which we understand it.

See also: Peirce, Charles Sanders (1839–1914); Sebeok, Thomas Albert (1920–2001); Sign Theories.

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Second and Foreign Language Learning and Teaching

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Not that long after the execution of his brother, Vladimir Lenin was himself banished to Siberia because of his political activities. In Imperial Russia, Lenin knew that the sequence of punishments for political offenses was first imprisonment, then banishment to Siberia, then banishment abroad, and then, execution. He was on step 2 of this sequence. He also knew that after his period in Siberia he would not cease his political activities and that the next stage would very likely be banishment outside Russia. Anticipating this possibility, he had evidently decided that his countries of choice for banishment would include Britain, and therefore it would be sensible to prepare himself, in Siberia, by learning English. Accordingly, he devised his own method. First, he tabulated and learned all the nouns. Then he went on to the verbs, the adjectives, the syntactic rules, and so on. He concluded that this systematic approach would enable him, on arrival in London, to converse with the locals. As it happened, he was amazed to discover that not only could he not converse well, he could not converse at all, and still less understand what people said! This chapter will explore factors that are relevant to the learning of a language, as well as the teaching that can promote such learning. It will review research into the nature of learning and acquisition and then go on to consider current views on the nature of language instruction. These reviews may shed light on the alternative courses of action that Lenin might have adopted.

Learning and Learners

We will consider language learning first, since it has a more fundamental role. A number of preliminaries are unavoidable here. First, there is the issue of a critical period for language, that is, a period during which acquisition is different from other learning processes. It will be assumed that there is such a critical period. Robert DeKeyser has demonstrated clear age-on-arrival effects for ultimate level of proficiency for Hungarian immigrants to the United States, that is, the younger the arrival, the higher the eventual performance. This research is far-reaching in its consequences. It implies that subsequent (second) language learning is mediated by general cognitive processes, an interpretation that has important consequences for instruction especially.

The second underlying issue concerns the concept of a focus-on-form. Michael Long has argued consistently that when learners engage in interaction, it is natural to prioritize meaning, with the result that form does not obviously come into focus. As a result, for effective learning to occur, it is necessary to *contrive* a focus-on-form, but in such a way that meaning is not compromised or distorted. A focus-on-form approach is consistent with current conceptualizations within cognitive psychology regarding the functioning of limited capacity attentional and memory systems. We cannot attend to everything, and so attention has to be directed selectively, and memory resources, especially working memory, have to be used efficiently.

The third underlying issue is over whether what is learned (the representation issue) is implicit or explicit, and indeed whether the learning process is

itself implicit or explicit (the transition issue). Allied to this is the question as to whether something that was initially explicit, e.g., a language rule or a structural pattern, can become implicit, or vice versa. The implicit-explicit distinction has largely replaced the earlier contrast between learning (explicit) and acquisition (implicit), and this realignment has been associated with a greater influence from contemporary psychology, and a strong interest in operationalizing the difference between implicit and explicit learning. Where people stand on this issue also has an important impact on different views of instruction.

Finally, by way of preliminaries, there is the question of the stages through which learners pass. It is useful to think of:

- Input processing strategies and segmentation
- Noticing
- Pattern identification, restructuring and manipulation
- Development of control
- Integration and lexicalization

Learners, of course, may be at different stages in this sequence for different parts of their developing language systems.

Each of these stages raises issues regarding the nature of second language learning. Bill VanPatten has argued that learners can benefit from being taught how to process input more effectively in order to focus on form. At the next stage, Dick Schmidt has developed the concept of noticing, arguing that before some aspect of language structure can be learned, it first has to be noticed, preferably with awareness. For Schmidt, the gateway to subsequent development is attentional focus, since it can permit deeper processing. In taking this position, Schmidt is arguing against Krashen's ideas on naturalistic learning and the acquisition-learning distinction. Clearly, though, whether noticing triggers explicit or implicit processes, the next stage in development is that the element that is noticed should become the basis for the learner identifying some sort of structural regularity in the language. This might be a new pattern, or the complexification of an existing pattern, and is the phase that accounts for development in the interlanguage system.

To perceive a structural regularity in the target language, however, does not mean that it can be used. Interlanguage development may sometimes be sudden and complete, but most accounts of second language learning assume that first insight has to be followed by a process of gradually increasing control over a new form. During this process, it is assumed that slow, effortful, and attention-demanding performance, which may also be error-prone, is progressively replaced by less conscious, easier, automatic, and fast performance. In this, the skilled control that is achieved over language performance resembles learning that occurs in other domains. Researchers have been interested in exploring the conditions that can enhance this development optimally, as well as describing the course and speed of such learning. A number of researchers, such as Nick Ellis, use general laws, for example, the power law of practice, to describe such learning.

In previous years, it was generally thought that the development of a high degree of automatization and control would have been the end-point of the learning process. In the last twenty years or so, linked perhaps with the development of corpus linguistics, there has been a greater realization of the importance of formulaic sequences and idiomatic language. That is, rather than prefabricated language being a minor part of the psycholinguistic abilities of the speaker, they are now seen as pervasive and vital for real-time communication. It is assumed that highly competent language users rely on formulaic language to ease the processing or computational burden during ongoing language production, and to sound native-like.

Having explored these preliminaries at a more explanatory level, there are a number of theoretical accounts relevant to the nature of second language development. Obviously the first to consider here is Universal Grammar (UG). Researchers influenced by this approach take a range of different positions, for example, full transfer/full access, vs. for example, residual access through previous parameter settings. Basically, all approaches assume the importance for second language learning of the continued existence of a Universal Grammar but differ over the impact that L1 learning has on this development. Lydia White proposed that it would be more appropriate to consider the role of UG in second language development as constraining the problem space, and requiring that L2 grammars be consistent with it, rather than expecting the L2 grammar to follow a deterministic path. In any case, in terms of relevance for instruction, there is the issue that UG researchers, necessarily, investigate features of language that are thought to be revealing about the operation of UG. In the main, these features, for example, the 'empty category principle,' the 'overt pronoun constraint,' do not follow the priorities of others, for example, language teachers. Second language research may therefore be more revealing for Universal Grammar than Universal Grammar is for language teaching.

An interesting contrast to UG that has emerged in recent years is William O'Grady's 'general nativism.' In this, there is acceptance, as with UG (which O'Grady terms 'grammatical nativism'), that human beings are 'wired' to perform learning tasks in a certain way, but O'Grady proposes that this nativist capacity is general in nature, rather than a module specialized for language. He suggests that the more general propensities (a) to operate on pairs of elements, and (b) to combine functors with their arguments at the first opportunity, are sufficient to account for the nature of language development and the structures that emerge. It is too early to evaluate this approach as yet, but it is interesting that there are slight affinities between it and that of another theorist, Manfred Pienemann and 'processability theory.' Drawing upon lexical functional grammar and Levelt's processing model, Pienemann takes as fundamental a performance-based incremental approach to language generation. He offers a different set of processing procedures and routines to O'Grady, for example, lemma access, the category procedure, etc., but he, too, then makes predictions about sequences in second language development. So in either case, the nature of the grammar that results, is seen as the consequence of processing procedures.

In contrast, there have also been proposals in recent years to account for second language development through connectionist architectures. These are networks of associations, involving several layers to connect inputs and outputs, i.e., containing hidden layers that serve as general-purpose learning devices. They are implemented through computer software, and this software can 'learn' and be tested. For example, it could take the input of a simple verb form in English and the output would be a past tense form. Such networks can be trained to produce highly accurate past tense outputs, for example, including characteristic mistakes that second language learners make. There is nothing specifically linguistic about the networks, so they are used to support the claim that specialist modules are not required for languages to be learned. The best known example of a connectionist network applied to second language learning is the competition model. This uses cues such as animacy and word order to predict how well learners with different L1/L2 combinations will learn how to assign subject and object roles in sentences.

The approaches to learning covered so far have focused on individual mental structures and processes. But other approaches have been more concerned to situate learning within a social context, and to explore the potential that interaction provides to give learners useful data. One example of this is Long's interaction hypothesis. Assuming the inadequacy of input alone (i.e., positive evidence), Long focuses on the provision of negative evidence, i.e., evidence that a mistake has been made. He proposes that such evidence can be obtained within natural interaction. In particular, he proposes that particular sorts of interactive encounter, i.e., those in which there is negotiation of meaning, leading to feedback moves such as confirmation checks, comprehension checks, clarification requests, and especially interlocutor recastings of the L1 speaker's utterance, provide timely and personalized negative evidence without compromising the (vital) naturalness of communication. This approach is located within Long's proposals for the importance of a focus-on-form, since form is brought into focus incidentally through these conversational devices, enabling learners to attend to it and perhaps, at a later stage, incorporate the effects of such feedback into their interlanguage. There have been questions as to whether there is immediate uptake of recasts that are offered, but Cathy Doughty argued that immediate uptake may not be the most effective way to detect the influence of recasts on subsequent development.

Also concerned with interaction, but from a radically different perspective is sociocultural theory (SCT). Drawing on Vygotskyan theory, the emphasis here is on the collaborative, unpredictable meanings that will develop through conversation, with each partner making contributions that can be taken up and extended by their interlocutor. Jim Lantolf argued that this is a fertile ground for second language development, and sociocultural theorists claim that tasks that generate lower negotiation for meaning indices (e.g., a discussion task) may provide other more useful scaffolding for language development, since they push learners to build meanings collaboratively, and to engage in more extended turns. Indeed, developing the notion of interaction, Merrill Swain has proposed that output is vital for second language learning since it pushes learners to do things like notice gaps in their interlanguage; to explore and test out hypotheses; and to attain a metalinguistic level of processing.

We turn now to consideration of learner characteristics and differences. The remainder of this section on learning will cover language learning aptitude, motivation, language learning strategies, and personality. Earlier conceptions of foreign language aptitude, strongly associated with J. B. Carroll, proposed that there is a specific talent for language learning, consisting of four components; phonemic coding ability (the capacity to analyze sound so that it can be better retained); grammatical sensitivity (the ability to identify the functions that words fulfill in sentences); inductive language learning ability (the ability to take a sample of a language and extrapolate to further language); and associative memory (the capacity to make links between items in memory). This view of aptitude, underpinning older aptitude

test batteries (for example, the Modern Languages Aptitude Test), was reasonably successful, since these batteries led to correlations of around 0.40 between aptitude and achievement test scores. It has not, however, had great recent influence, partly because it has been argued that this conception of aptitude is irredeemably linked to instruction, indeed particular forms of instruction, such as audiolingualism, rather than to informal and acquisition-rich contexts.

More recently, however, a reassessment of aptitude has taken place. A new aptitude battery has been developed, CANAL-F. The battery incorporates cumulative, thematized learning within the sequence of subtests. Aptitude has also been reconceptualized and linked with second language acquisition processes, following the stages outlined above (noticing, pattern identification, etc.), and this sequence can also be related to the constructs that are said to underlie CANAL-F, such as selective encoding (noticing) and selective transfer (inductive language learning ability and pattern restructuring). Complementing this, there have been studies that have linked aptitude information to acquisitional contexts. These studies have shown that aptitude generates correlations with informal and implicit learning conditions as well as explicit ones. Indeed, reviews of the available evidence demonstrate that predictive relationships emerge in both informal and formal settings.

Motivation has seen an even greater diversification of research. This area has been dominated by the work of Robert Gardner, whose analysis of motivation in terms of integrative and instrumental orientations has been fundamental. He has continued to publish and to extend his model of second language learning. However, some earlier reviews of his work that called for a widening of the research agenda have led to different perspectives. There have been proposals for slightly different conceptualizations of motivational orientation, but essentially still within the Gardner framework (for example, proposals for knowledge, travel and friendship orientations, and suggestions that a world 'modernity' orientation is relevant).

There has also been a widening of the theoretical framework for motivation, with greater connections with mainstream psychology. For example, one perspective emphasizes linguistic self-confidence, which links with willingness to communicate research (WTC). This explores the reasons that underlie a learner's readiness to actually engage in communication. There have also been some studies on motivational attributions, and these indicate the richness of attributional thinking on the part of language learners and the impact such thinking can have on the maintenance of motivational strength. Such studies also indicate how qualitative methodologies can be applied to the motivational arena.

Perhaps the greatest change in motivation research concerns the temporal dimension. Many have argued that motivation needed to be related more clearly to the classroom, and conceptualized dynamically, rather than in terms of static, unchangeable orientations. Zoltan Dornyei, for example, uses action control theory as a way of achieving this. He argues that one needs to explore influences before a task is done (for example, motivational orientations), different influences on motivational levels while a task is done (stimulating activities), and also the postactional stage, where learners reflect after learning on the degree of success they have achieved, and its likely explanations, such as a personal lack of effort. Such posttask refection may lead learners to make attributions that will influence future motivational levels. Interestingly, Gardner's latest research also explores the issue of the malleability of motivation, and how some aspects of the Gardner model, such as integrative orientations, do not seem malleable, while other areas, such as attitudes towards the teacher, are.

Learning strategies research has continued to be researched intensively. Some early problems with this area continue to cause difficulty. One of these is the categorization of learning strategies, and area about which Ellis suggested: "definitions of learning strategies have tended to be *ad hoc* and atheoretical." In response to this, Zoltan Dornyei and Peter Skehan suggested that one should operate with four main classes of strategy:

- Cognitive strategies
- Metacognitive strategies
- Social strategies
- Affective strategies.

They also draw attention to the way that within mainstream psychology, there has been a movement away from learning strategies and toward the term 'selfregulated learning,' which more generally captures the learners' conscious and proactive contribution to enhancing their own learning process. Interestingly, though, there has been recent evidence based on a confirmatory factor analysis in an attempt to distinguish between the various models that classify learning strategies, and this suggests that Rebecca Oxford's six-factor model (the above four, plus a separation of cognitive into cognitive and memory, and the addition of compensatory) best satisfied the data.

Perhaps the one other learner difference area where there has been interesting progress has been that of personality. Some researchers have tended to dismiss personality as the source of empirically-verifiable

correlations with language learning achievement. However, if one focuses on extroversion, it appears that applied linguists tend to have done two things (a) they have not been conversant with current theories of personality, or of associated standardized forms of personality assessment, and (b) they have tended to focus on possible relationships between personality variables and learning. When personality assessment is carried out using contemporary and validated personality inventories, results are clearly more stable. In addition, consistent correlations emerge between such extroversion–introversion measurements and foreign language performance – not with learning but with, for example, tests of speaking.

Teaching

Some twenty-five years ago, when second language acquisition research first began to have an impact, the value of instruction itself came under question, since direct evidence of its beneficial effects was slender, and it was proposed that exposure to language (and incidental learning) was sufficient for interlanguage development to occur. An important review article by Michael Long, "Does second language instruction make a difference?" responded to these issues and evaluated the available research on instructional effectiveness. Long's work was a meta-analysis – he evaluated, reanalyzed, and synthesized a wide range of studies and argued that the balance of evidence suggests that instruction does make a difference, and is associated with faster learning, and higher ultimate attainment. More recently, a major updated and extended meta-analysis has been published that demonstrates instruction does have an appreciable effect on performance; that explicit instruction produced larger gains than an implicit approach, which was, in turn, significantly greater than for control group conditions; and that instruction is durable in its effects.

What John Norris and Lourdes Ortega, in this updated meta-analysis, did not set out to do is provide a detailed justification of how instruction works, or, what specific aspects of instruction generate the differences that are found. Consequently, it is not easy to point to evidence of optimal learning environments – we simply know that having instruction compared to not having instruction is a good thing. How this lack of a fine-grained understanding of the effects of specific instructional types will be resolved is not clear. One approach is to continue to use research designs that do explore methodological comparisons that would be recognizable by teachers. Alternatively, the question may need to be posed differently. As Cathy Doughty recommends: "Rather than at the level of 'method,' the operationalization of instructional treatments is now considered best analyzed psycholinguistically in terms of input-processing enhancements that facilitate L2 learners' extracting forms and mapping them to meaning and function." She discusses a range of techniques that might achieve this, examining them in terms of degree of obtrusiveness, and also relating them to the functioning of limited capacity attentional functioning.

The preceding discussion means that explorations of language teaching options cannot be conducted simply in relation to evidence. But of course teachers need to act, and any broader research findings and theories about learning are going to be only one of the influences on such actions. We will next consider the major issues that motivate debates about teaching. Most fundamental of all, perhaps, are the topics of syllabus and methodology. The former concerns what is taught, and is traditionally approached in terms of the units of teaching, as well as their sequencing. The latter is concerned with how whatever is taught is taught. As we shall see, there have been changes with respect to each of these, although it is a moot point as to whether these changes are more characteristic of the 'chattering classes' of language teaching professionals rather than what happens in most actual classrooms.

Until relatively recently – the early 1970s – there seemed relatively little controversy in syllabus or methodology. The units of syllabus were seen to be language forms, and their sequencing was subject to reasonable consensus. True, the criteria that were used to establish syllabus ordering were not entirely convincing (for example, buildability, frequency), but there was considerable agreement about a high proportion of the ordering that was characteristic for the teaching of English, at least. This consensus was challenged during the 1970s and 1980s, and alternative proposals were put forward, with alternative units, such as functions and notions and lexical elements, and alternative classroom activities such as tasks and procedural syllabuses. Most radical of all, perhaps, was Candlin's proposals for retrospective syllabuses, where the syllabus that is taught is the result of negotiation between the teacher and learners, building on the distinction between the plan for teaching and the classroom reality of what actually happens, which are not going to be the same thing, Chris Candlin has suggested that one can only really say what a syllabus has been *after* a course has taken place. There were also vigorous attempts to develop specific purpose syllabuses based upon the analysis of learner needs.

Interesting issues have also been raised about the feasibility and limitations of planning courses, and

whether it is even worthwhile to use course books. There seemed to be strong moves to use meaning-units as the basis for teaching, and to bring the learner more centrally into decision making. But what is interesting is how this debate has lost vitality. Now there is much less debate on these issues, and, paradoxically, the solution has been something of a consensus to use forms of what are called 'multi-syllabuses,' where the early pages of a course book or syllabus document will contain a table indicating how structural units, functional units, context, themes and tasks are meant to exist in harmony, so that the syllabus can claim to comprise all the potential syllabuses in one. Even so, it would appear that some of the strands in a multisyllabus are more equal than others, and it is no surprise that the most dominant of these is the structural core.

There have also been discussions regarding what should be done within classrooms, and what methodologies are better. Significant reviews are available of the major contrasting methodologies, such as grammar translation, audiolingualism, functional-notional, and communicative approaches. Grammar-translation emphasizes written language and the use of rules (and exceptions) to construct sentences in a deductive manner. Grammar is preeminent and item-based vocabulary learning is extensive. Audiolingualism, in contrast, emphasizes the spoken language and teaches this inductively through stimulus-response-influenced pattern practice. Functional–notional and communicative approaches share a much greater emphasis on meaning and the use of (more) authentic materials. Functional–notional approaches use itemized meaning-units as a syllabus basis and are usually concerned with language use and contextualized teaching. Even so, there is the possibility that functional–notional approaches, although using meaning units, can be associated with fairly traditional practice-oriented methodologies.

Functional–notional approaches were really the foundation for the development of a communicative approach to language teaching, which is now regarded as the orthodoxy in many parts of the world. Communicative approaches come in two strengths: weak and strong. The weak form is compatible with multisyllabuses and gives communicative activities an important role, since it is assumed that learners will need to work on the development of communicative competence, and that they will not be able to do this without engaging in realistic communication of individual meanings. This goes well beyond the production phase of the three Ps, and requires authenticity of language use and genuine interaction. However, the weak form can be associated with optimism that teaching materials can blend structure, function, and communicative activity to promote balanced and integrated progress. The strong form of communicative teaching, now associated with task-based approaches, regards task itself as the primary unit and then sees language as following the demands of the task, so that the role of the teacher is to respond to whatever language the task generates as important. Jane Willis described a methodology for approaching instruction in this way, in which a language focus is the last phase in teaching, after some new language has been made salient by the need to do a task.

Of course, these are not the only methodologies that have been used, and there are other 'fringe' approaches. There are also, for example, total physical response, the silent way, suggestopedia, and community language learning, although it is interesting to note that while each of these has its devotees, it can be argued that they are becoming even less central (cf. the change in the amount of coverage in the first and third editions of Harmer's *The practice of communicative language teaching*).

The debates over methodology have been intense. In an attempt to make progress in these debates, in which distinctions between syllabus and methodology were not always clear, it has been proposed that it is fruitful to look at these issues in terms of approach (underlying theory), design (syllabus considerations), and procedure (methodology) and what goes on in the classroom, in order to characterize a broader concept of 'method.' In an ideal world, an approach to language teaching should balance all these things, but in practice, one of the three might dominate, somewhat at the expense of the others. Hence, with audiolingualism, the focus is on procedure, as well perhaps as approach, but there is much less to motivate design. In contrast, one could argue that functional-notional approaches emphasized design, but with less emphasis on approach and procedure.

It is interesting now to reflect on these debates and the intensity they used to provoke. Two issues stand out. First, prevailing practice would generally be seen as a communicative approach to language teaching, or at least this is what would be said, even if what happens in any particular classroom might not indeed be communicative language teaching. The approach has become the general orthodoxy. Second, and probably more important, we have seen the emergence of the course book series. We are now in a position where the production of course book materials is big business and associated with the commitment of very considerable resources. These resources are directed at the preparation of the course book proper, the extensive piloting of material, the development of a wide range of supplementary and ancillary materials (including websites), even the development of associated tests. One consequence of these developments is that the role of the teacher is changed. There is less reason for teachers to devise their own materials and it is much more possible simply to 'teach the book' as the course book's ubiquitous multisyllabus is followed.

An interesting way of exploring changes in language teaching is a comparison between two editions of the same book, Jeremy Harmer's *The practice of English language teaching*. In addition to a great deal of common ground, there are some interesting changes. First, there is something of a retreat from grander ideas on syllabus and methodology, to a greater concern for techniques at a more micro level, and issues connected with classroom management. Interestingly, there is more emphasis on how to handle mistakes and how to provide feedback. Second, there is greater coverage of language itself, and of how it may now be studied through corpus analysis so that more realistic language is used. Third, there is a greater concern with course books. Coverage is provided about course book selection and how to work with a course book, changes that reflect the point made earlier regarding the greater domination of course book series presently. Finally, there is very significantly increased coverage of the role of technology in language learning, with complete chapters devoted to teaching using video, and educational technology. This last development is undoubtedly going to grow enormously in importance. There are now increasing numbers of books about the use of computers and the internet in language teaching, and leading journals such as *English Language Teaching Journal* contain regular sections detailing useful Web resources.

Language teaching, happily, still has some active areas of disagreement and debate. There are interesting proposals regarding process syllabuses, where the role of the learner in negotiating what will happen in the classroom is recognized and fostered, even to the extent of allowing learners to influence the nature of assessment. This work nicely complements applications of sociocultural theory to second language acquisition, which also regards the joint construction of meanings as fundamental (although in this case more because it facilitates acquisition itself). Process syllabus proponents are perhaps more interested in the rights of learners to influence their instruction as well as the broader societal benefits that follow from learners who learn how take personal responsibility in this way.

A second area for lively exchange concerns the role of tasks in language teaching methodology. Two sub-questions are relevant from this debate. First, there is the issue of how predictable tasks are in terms of the effects of task types and task implementation, for example, pretask planning, on the language that is produced. One response is to doubt any predictability because learners will negotiate their own interpretations in ways that reflect their own interests and desires, whereas another is to research these factors in the hope of providing evidence to assist teacher decision-making. Second, there is the issue that tasks have been attacked because it is proposed that what should really be the focus for teaching is grammar. In this view, tasks might be permissible as a form of language use after more conventional grammar teaching has taken place. It has been suggested that they should not used as the unit of language teaching, or even regarded as a means to enable interlanguage to change and develop. In contrast, others argue that tasks provide a way for acquisition processes to be brought into the classroom and become the basis for learner-driven development.

A final area of debate within methodology concerns the issue of appropriateness. There have been general debates about the connections between language teaching – especially English language teaching – and imperialism. The argument is that the teaching of English is not a neutral activity, but contributes to the perpetuation of existing international power structures, and implicitly the downgrading of local cultures and power. At a much more specific level, Adrian Holliday has argued that there has been insufficient attention paid to local needs and to the different conditions that operate in many language teaching contexts, and that another form of imperialism is the way methodologies devised in one set of circumstances are assumed to be relevant for wholly different context. At the broadest level, he contrasts two contexts and the imbalance between them. The first concerns approaches to language teaching developed for favorable circumstances (for example, Britain, Australasia, and North America, which he refers to, using the relevant initials, as BANA), a context in which individuals often pay fees for their instruction, are studying voluntarily, and in relatively small groups with good resources. In contrast, the second context, referred to as TESEP (*T*ertiary, *Se*condary, *P*rimary) relates to state school education in the rest of the world, where there are usually large classes, with less favorable resourcing, different home-school relations, and learners who have no choice but to be in a classroom. They are also likely to be heading for a testing system that is less communicative in nature. Methodological options appropriate in the former context do not generalize easily to the latter, so

more attention needs to be paid to local cultures, realism about local resourcing, and local educational traditions.

Conclusion

As the first section of this chapter indicated, the field of second language acquisition research has made a range of interesting contributions to our understanding of how languages are learned. There are alternative accounts available and regular research output. It can even be argued that the two subfields of acquisition/learning processes and learner differences are coming together for the first time, to the mutual benefit of each. We have also seen that language teaching is an area with considerable vitality. Teaching is still strongly influenced by language description, but the consensus communicative approach has meant that a range of activities focusing on meaning are also central, and that the quality of materials available (if not always their accessibility) has improved dramatically.

As a final point, it is worth making the observation that although the two areas of learning and teaching might reasonably be expected to have strong relationships with one another, in practice, they do not. Learning/acquisition tends to have a research emphasis, and while it does have relevance for teaching, this requires some extrapolation. Teaching, in contrast, while not without interesting research work, nonetheless emphasizes other criteria in establishing and justifying its procedures. It would be desirable to see this separation reduce in the future, for the benefit of both.

See also: Communicative Language Teaching; Foreign Language Teaching Policy; Identity: Second Language; Interlanguage; Language Education: Grammar; Language Teaching Traditions: Second Language; Motivation and Attitude in Second Language Learning; Second Language Acquisition: Phonology, Morphology, Syntax; Teaching Technologies: Second Language.

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Second Language Acquisition: Phonology

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Introduction

This article provides an overview of work on second language (L2) phonology that has been undertaken within a generative framework. The discussion first addresses the acquisition of segments, then the acquisition of syllable structure and of higher level prosodic phenomena. A somewhat selective view of the field is presented, but an extensive bibliography points to additional analyses for those who want to read further. In much of the discussion here, the focus is on the situation that arises when a second language learner is attempting to acquire a structure that is absent from the first language. For an overview of broader issues in second language phonology, see Archibald (1998) or Major (2001).

What Is Acquired?

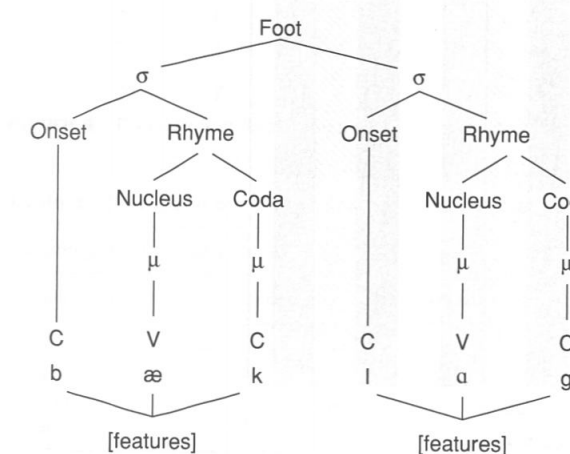The first thing to consider in looking at the acquisition of phonology in a second language is the question of what exactly is being acquired. Second language learners must acquire features, segments, moras, syllables, and feet. A theory of phonological knowledge must be adopted; the model in Figure 1 indicates some of the areas that will be examined in the following sections. Let us begin by looking at the acquisition of L2 features.

Phonological Features

Brown (2000) argued that if featural representations are lacking from the first language (L1), they will be unacquirable in the L2. She looked at the acquisition of English /l/ and /r/ by speakers of Japanese and Mandarin Chinese (neither language contrasts /l/ and /r/ phonemically). The Japanese situation is diagrammed in **Figure 2**, where SV represents 'sonorant voice.' In Japanese, [l] and [ɾ] are allophones of a single phoneme. This phoneme may appear only in a simple onset in Japanese. Mandarin Chinese also lacks the contrast (and hence the structure is the same as shown in **Figure 2**). If the segment is taken to be the level of explanation, then we might predict that both Mandarin and Japanese speakers should be unable acoustically to discriminate /l/ from /r/ (given their L1 feature geometries). In general, however, Japanese speakers are unable to discriminate /l/ from /r/, both acoustically and phonologically (in lexical choice tasks), whereas Chinese speakers discriminate the contrast in both tasks. The graph in **Figure 3** shows the overall performance of participants in an auditory discrimination task designed to assess this
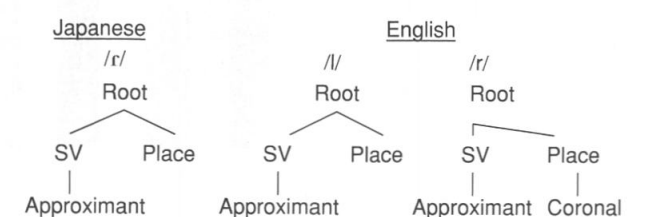

Figure 1 Phonological structure.

Figure 2 Feature geometry of liquids (SV, sonorant voice).