What we can learn from questions: ESL question development and its implications for language assessment

BRONWEN DYSON – University of Sydney

ABSTRACT

This article sketches research into the developmental stages of question formation by English as a Second Language (ESL) learners and its application to language assessment. It focuses on one critique that claims that such research emphasises form at the expense of the interaction between form and meaning. To address this issue, this article outlines the lexicogrammatical approach to second-language speech processing in the most recent version of the stages paradigm. This approach is investigated through a study that followed two Chinese-speaking ESL learners during their first academic year in Australia. In addition to providing further evidence of stages in question formation, the study reveals how learners map meaning and form in their questions. While they initially rely on the meanings of base lexical items, fixed word order and intonation, they gradually add grammatical meaning by varying the order, form and argument structure of lexical items. The implications of these findings for assessment are explored, particularly the view that schedules of stages should supplement proficiency testing.

Introduction

English questions pose a challenge for ESL learners. I am continually reminded of this when postgraduate international students ask questions such as:

- Do the topic sentence go here?
- When I can copy this one?
- I don't know how should I get into Yahoo.

Rather than seeing such questions as errors, Pienemann and Johnston (1986, 1987) argue that they are signs of a developmental process in which question formation is acquired in stages and that this insight should inform second-language assessment and teaching. Recent research has focused more on the nature and explanation of the stages (eg Pienemann 2005) than on their application (Mackey 1999; Pienemann and Kessler 2007). The early Pienemann and Johnston research has remained a reference point for independent studies by Spada and Lightbown (1993, 1999) and Purpura (2004), among others. However, while recognising and in some cases adding to the empirical support for developmental stages in question formation, these studies have also questioned the claims and relevance of the earlier research. One particularly important criticism is that the structural orientation of stages does not match the emphasis on meaning in communicative assessment and teaching.

Recent reconceptualisations within the stages paradigm (Pienemann 1998, 2003, 2005; Dyson 2004) have revealed the lexicogrammatical nature of ESL question development. This perspective enhances the compatibility between stages research and communicative approaches, and facilitates renewed exploration of how stages can be applied to current assessment procedures. To advance this viewpoint, this article begins by surveying the question formation stages developed in the 1980s and the research that evaluated the stages. Despite some limitations, the developmental stages form an important basis for understanding learner questions. The article then outlines the current explanation of stages in processability theory (Pienemann 1998, 2005) and presents and discusses the findings of a longitudinal study that assessed the development of two Chinese-speaking ESL learners. Finally, the article suggests ways in which the findings can enrich language assessment.

Stages in question formation

The interest aroused by the work of Pienemann and Johnston (1986, 1987) on stages in question formation was partly due to its firm empirical foundation (Larsen-Freeman and Long 1991). Pienemann and Johnston applied two innovative research methods – the emergence criterion and implicational scaling – to detect stages in the development of questions and 50 other structures.
in data collected through an Adult Migrant English Program (AMEP) initiative known as the SAMPLE project (Johnston 1985, cf 1997). This initiative was a cross-sectional study of spoken language development in 16 adult immigrant ESL learners. Rather than measuring mastery, the researchers based the acquisition of a question-type on one productive (that is, non-formulaic) token (Pienemann, Johnston and Brindley 1988: 235). The questions acquired by each of the informants were then ordered implicationally. Implicational scaling is a procedure based on the rationale that ‘if sample A contains rule 3, then it will also contain rules 2 and 1’ (Pienemann 1998: 134).

Applying these two main methods, six stages in the development of question syntax in spoken production were hypothesised, as shown in Table 1.

These stages have been described many times (Pienemann 1998, 2005) but they are summarised in the right-hand column of Table 1 because the same progression was found in the study that is the focus of this article.

Pienemann and Johnston (1986, 1987) observed that these stages were common to all the learners studied and that individuals differed linguistically within a single trajectory. As an example of variation, Pienemann and Johnston (1986) note that some ESL learners acquire Stage 3 do-fronting questions later than others but not before Stage 4 structures. Unlike similar accounts of stages in question formation (eg Ellis and Barkhuizen 2005), Pienemann and Johnston not only described the findings but endeavoured to explain them.

The early Pienemann and Johnston framework is often seen as purely structural or syntactic, but it sowed the seeds for a broader, more lexically based approach. The ESL stages invoked syntactic movement – for example, the Stage 4 learner can ‘move … an element out of the middle of a string to either its beginning or end’ (Pienemann and Johnston 1987: 76). It also added an initial word stage to the five earlier German as a Second Language stages (Meisel, Clahsen and Pienemann 1981) and extended the pioneering speech-processing explanation (Clahsen 1984) to morphology.

More controversially, Pienemann and Johnston (1986, 1987, cf Pienemann, Johnston and Brindley

Table 1: Stages in the development of questions

<table>
<thead>
<tr>
<th>Stage</th>
<th>Question-types</th>
<th>Examples</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Cancel inversion</td>
<td>I wonder where he is.</td>
<td>Learners acquire statement word order in indirect questions.</td>
</tr>
<tr>
<td>5</td>
<td>Aux2nd</td>
<td>that?</td>
<td>Learners place the auxiliary (do or another type) in second position in direct questions, also overgeneralising this to indirect questions.</td>
</tr>
<tr>
<td></td>
<td>Do2nd</td>
<td>Where can he go?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Why did he eat?</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Yes–no inversion</td>
<td>Have he seen it?</td>
<td>Learners form wh- questions and yes–no questions via inversion, or remapping, of wh-words and copulas, as well as subjects and copulas/auxiliaries.</td>
</tr>
<tr>
<td></td>
<td>Copula inversion</td>
<td>Where is my purse?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is she at home?</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Wh-fronting</td>
<td>What you want?</td>
<td>Learners question by fronting a constituent before the subject, verb and complement. In this way, they ask yes–no questions with an initial do and wh- questions with an initial wh-word.</td>
</tr>
<tr>
<td></td>
<td>Do-fronting</td>
<td>Do you understand me?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Rising-intonation SVO (Subject Verb Object/ Complement)</td>
<td>You like Chinese food?</td>
<td>Rising intonation remains the major questioning resource but at this point it is built onto SVO clauses.</td>
</tr>
<tr>
<td>1</td>
<td>Word/s</td>
<td>yes?</td>
<td>Second-language learners ask questions by adding rising intonation to single words or formulas.</td>
</tr>
</tbody>
</table>
argued that the diagnosis of stages should be an integral part of assessment because acquisition-based procedures, such as Rapid Profile, give greater validity and reliability than proficiency tests (Pienemann, Mackey and Thornton 1991).

In the view of Pienemann and Johnston (1987: 69), Rapid Profile has greater construct validity than proficiency tests because the former is based on ‘the actual process of how the language develops in the individual and hypothesises explanations of it’. On the other hand, proficiency tests are founded on test designer assumptions about this process. Rapid Profile also has greater reliability than proficiency measures because testers have more objective criteria on which to base their judgments.

Evaluations of the ESL question stages

The stages of ESL question development became well known, partly due to research by Spada and Lightbown (1993, 1999), and, indeed, they are sometimes referred to as the Spada and Lightbown stages (eg Hawkins 2001). Lightbown (1985) expressed reservations about Pienemann’s (1985) application of stages to syllabus construction and observed that the stages described covered only the first months of language teaching.

However, intrigued by the relationship between stages and teaching, Spada and Lightbown (1993, 1999) adopted the 1987 and 1988 versions of the question stages in their investigations of the acquisition of question formation by child francophone ESL learners. Spada and Lightbown (1999: 14) found that in oral production ‘learners progress through an acquisition sequence without skipping stages’, despite exposure to questions more advanced than their own stage. However, the results on the Oral Production Task led them to question the value of applying this insight to teaching (cf Lightbown 1998). When the students, who were predominantly at Stages 2 and 3 on a pre-test, were exposed to a range of Stage 4 and Stage 5 question-types, they tended not to move to these higher stages on a post-test (Spada and Lightbown 1999: 14). One weakness in the methodology of this study needs to be mentioned, since it helps explain this result. As the sample transcript provided by the authors shows, the Oral Production Task (Spada and Lightbown 1999: 8) appears to have mainly elicited Stage 3 do-fronting questions – *Do you have a dog?* – and Stage 2 rising-intonation SVO questions – *The dog is on the bus?*

Another reason for the result could be that Spada and Lightbown (1999) applied the emergence criterion more conservatively than Pienemann and Johnston (1987) in that they required two different types of questions for each stage, for instance both yes–no and copula inversion at Stage 4, to place a learner at that stage.

Tarone and Liu (1995) also investigated the question stages in a study of the effect of context on the longitudinal acquisition of a Cantonese boy. This study found that the boy did not acquire questions in the predicted order. He first reached Stages 4 and 5 and only later developed questions aligned to Stage 2 and Stage 3. The authors concluded that the nature of the interlocutor overrode the universal sequence because the Stage 4 and Stage 5 questions emerged in more nurturing researcher–informant interactions, while the Stage 3 questions arose in more direct peer–informant interactions.

Tarone and Liu (1995) raise the important issue of how the social context influences acquisition but there is also a methodological problem in this study. The examples for Stage 4 – *Where’s the monkey?* – and Stage 5 – *What are you doing?* – would not be regarded as evidence for either stage by researchers working in the stages paradigm. The token given for Stage 4 has the contracted form of the copula *is* attached to *where* and, as Tarone and Liu (1995: 118) point out, this is ‘an unanalysed unit’ and is not evidence of productive movement or remapping of the wh-word. The token given for Stage 5 is also suspiciously formulaic, with a common collocation of lexical items.

Hudson (1993) critiqued the application of stages research to assessment on two main grounds. The first was the lack of external criteria, such as proficiency scores, against which to reference developmental stages, a criticism perhaps prompted by the absence of learner data in the early work of Pienemann and Johnston (1986, 1987). The second problem was that, when compared to proficiency tests that aim to assess global communicative competence, the Pienemann and Johnston proposal was restricted to ‘a narrow definition of language’ (Hudson 1993: 484–487), namely grammatical acquisition.

Although Hudson voiced general concerns about the place of stages in communicative assessment, his criticisms had certain flaws, which Pienemann,
Johnston and Meisel (1993) pointed out at the time. In relation to the first criticism, they note that the reference criteria for assessing developmental stages are the distributional analyses of individual learner acquisition. In relation to Hudson's second criticism, Pienemann, Johnston and Meisel (1993: 501) acknowledged the limitations of Rapid Profile, a 'procedure ... designed to track nothing more than grammatical development', which is a purpose best achieved by concentrating on grammatical items and their lexis.

The criticisms of the application of stages to assessment continue. More recently, while accepting that research into developmental stages may complement proficiency approaches, Purpura (2004), citing Lightbown (1985) and Hudson (1993), argues that the application of stages to grammatical assessment is premature, given four empirical problems and one theoretical problem. Turning first to the empirical difficulties, Purpura (2004) states that:

1 The research base is too limited, since few fixed sequences have been found.

2 The informants are naturalistic and the stages have not been tested on learners whose only input is in the classroom.

3 The research has not tackled the influence of first language on the rate of acquisition, an issue pertinent to mixed learner groups.

4 The research has not specified the relationship between stages and proficiency scores, as is necessary if comparisons are to be made between the two.

Purpura's (2004: 37) theoretical objection is that 'acquisition sequences make reference only to linguistic forms; no reference is made to how these forms interact with the conveyance of literal and implied meanings associated with a specific context'.

As this quotation shows, Purpura (2004: 83) does not think that form is irrelevant to grammatical assessment but that a definition of grammatical ability is needed to assess 'how learners use grammatical forms as a resource for conveying a variety of meanings'.

While agreeing with Purpura (2004) that further research is needed into the stages-assessment interface, some amendments to his summary are needed for a reliable agenda. Work has in fact been done on many areas of grammar, including some that are identified as neglected; for example, gerund complements (e.g. Pienemann 1998), classroom-input only learners (e.g. Pienemann 1989) and the relationship between stages and proficiency scores (e.g. Pienemann and Mackey 1993). Turning to the emphasis on form, Purpura (2004) does not recognize that stages research has provided a way of understanding how learner forms, with their meanings, are gradually mapped onto target ones, with their wider range of literal and figurative meanings. Also, it seems that it is not widely understood that the stages paradigm has long accommodated functional interpretations of second-language acquisition (e.g. Meisel, Clahsen and Pienemann 1981; Pienemann 1989), the source of processing explanations, and has increasingly tackled the form-meaning interface (Pienemann 2005).

**Question formation: form and meaning in second-language processing**

To show the links between research on stages and the assessment of meaningful communication, it is necessary to look at the most recent version of the stages paradigm – Processability Theory (Pienemann 1998, 2005), which is a theory of incremental second-language processing. Processability Theory (PT) is indebted to Levelt’s (1989) extensive research into the social and cognitive aspects of speaking, which includes the blueprint presented in Figure 1 (see Pienemann 1998: 54).

The three components of the blueprint that figure prominently in PT are the conceptualizer, the lexicon and grammatical encoding. These will be described using the utterance – *she like apple?* This is an early utterance of one of the Chinese-speaking ESL learners in the study that is the focus of this article. In the conceptualizer, speakers generate messages, which are represented semantically in the brain. To express these meanings in language, the speech-processing mechanism accesses words in the mental lexicon (such as *like* and *she*) and syntax – for example, the category of verb, phonology and morphology. This grammatical information is accessed by the formulator using procedures, or *encoding operations*, by which the brain automatically builds phrases and clauses to create spoken messages (Levelt 1989: 236). Since
these procedures are required to produce speech under typically extreme time constraints, they are largely autonomous and unconscious. Due to this architecture, these skill-building procedures (Stages 2 to 4) initially carry limited amounts of grammatical information, only exchanging information at the sentence level at Stage 5 (see Pienemann 2005: 24 for the application of the processing procedures to English).

For this and other psycholinguistic reasons, second-language grammar develops in stages, a process represented in Lexical Functional Grammar (Bresnan 2001). Lexical Functional Grammar is a non-transformational version of universal grammar characterised by a rich lexicon in which lexical entries are annotated with grammatical features such as gender. Parallel processing occurs in the three linked components of the grammar:

1. the argument roles of predicators, for example experiencer
2. the hierarchical organisation of words, phrases and clauses
3. the interpretation of the grammatical information, including argument functions such as subject and non-argument discourse functions such as topic.

**Question development of two learners**
The two Chinese-speaking learners who are the focus of this article were a female (Philomena) aged 12 and a male (Daniel) aged 13. They had recently
arrived in Sydney, Australia, from Shanghai, China. They had minimal proficiency in English and were attending an Intensive English Centre where they remained for a full academic year (February to December), studying English and secondary school subjects in English. I met these students six times over the year, in sessions lasting between 45 minutes and one hour. I recorded them as they talked to me in spontaneous, meaning-focused speech, and carried out communicative tasks that aimed to elicit questions, in addition to a range of other structures (Dyson 2004).

The questions in the transcribed speech were analysed to see whether they were acquired according to the stages criteria. As in other research within the stages paradigm (Di Biase and Kawaguchi 2002; Mansouri 2005), a token of a structure was judged to be productive if there was lexical and/or structural/morphological variability. In this study, four such contrasts were required to establish acquisition.

This section proceeds sample by sample, first presenting the questions acquired by the learners and then discussing what they show about the mapping of meaning and form.

**Session 1 (March):**

Both learners had acquired Stage 2 questions.

In asking yes–no questions about the story portrayed in two pictures, both learners asked a range of productive rising-intonation SVO questions:

- Philomena: *mm. she want the noodle?*
- Daniel: *he. is her friend?*

They also asked information questions by using formulas or by placing the wh-word before a subject:

- Philomena: *what's this?*
- Philomena: *who she. ah he?*

Neither acquired clausal wh-questions of any kind.

As the data show, when Stage 2 ESL learners ask questions to seek confirmation, to find out information and so on, they express their meanings via words, SVO order and rising intonation. When the study began, these two learners had moved past the word stage and into clausal questions, but words, individually and in combination, were important in the creation of meaning. These words are base (ie non-inflected, lexical and grammatical elements), which head phrases. Other meaningful lexical elements are formulas that are gradually analysed by the formulator, as seen in the introduction of new words, such as *where* in Philomena’s otherwise formulaic wh-questions.

Syntactically, however, the major new resource for communicating meaning at this stage is the SVO clause type. In this, learners directly map conceptual meaning onto form in an unmarked correspondence, which relies on universal, not language-specific, syntax. This means that the most prominent role in the semantic hierarchy, an agent or experiencer, is mapped onto the subject, acting as the discourse function ‘topic’ and occupying the initial and most prominent position, while the role of theme is mapped onto any object (Pienemann 2005: 233ff). To this, learners add intonation from the formulator’s phonological encoding component (Levelt 1989).

**Session 2 (July):**

While carrying out a story-guessing task with hidden pictures, both learners showed greater variety in their questions and manifested varying approaches but did not reach acquisition on any new question-type.

Philomena’s most frequent questions were rising-intonation SVO and both yes–no and wh-copula questions, some with contracted, and others with full, verbs. However, as the following example suggests, they had a formulaic ring.

- Philomena: *what is bath?*
- Daniel used less rising-intonation SVO questions. His questions, though also quite formulaic, were attempts at Stage 5 Aux2nd questions with subject–verb agreement:

- Daniel: *uh. she said ah. what are y(ou) doing. kids?*

**Session 3 (August):**

Philomena showed clear evidence of Stage 3 questions, while Daniel reached acquisition in no new type and, indeed, asked few questions.
In a picture differences task, Philomena showed she had acquired do-fronting questions, by varying the verb and its complement:

- Philomena: did you, do you have this one?

Her questions were otherwise very lexically based, as indicated by her have-you-got tokens, in which only the complements were varied, not the verbs:

- Philomena: um have you got tree in your picture?

In contrast to Philomena, Daniel asked just two questions – one rising-intonation SVO and one do-fronting:

- Daniel: is he wearing a pink dress?

In the expression of meaning, do-fronting is significant because the syntax signals a yes–no question. Hence, in this study do-fronting is the first evidence of the mapping of grammatical form onto interrogative meaning. At this point, the do is restricted to interrogatives and is initially in the base form (ie without tense or grammatical features other than the category of auxiliary verb), although tense may be added later in Stage 3. In the processing of this question, the formulator interprets do as a yes–no question-introducer which precedes the subject. In terms of argument relations, these questions follow a linear SVO order with the same unmarked, semantic role alignment as at Stage 2.

The reader may wonder about the claim regarding the fixed form of do, since the example shows Philomena using did with do. In the transcript, however, she systematically used did, without indication of a past meaning, until switching to do, apparently following the interlocutor’s consistent use of do. So, it appears that she replaced did with do as the base question auxiliary.

Session 4 (September):
The students were asked to guess a story in pictures, and the two students had acquired new information question-types.

Philomena acquired wh-fronting, providing further evidence that she was at Stage 3:

- Philomena: What he take?

In contrast, Daniel acquired wh-final, in which rising intonation is added to a clause final wh-phrase:

- Daniel: He wore what clothes?

Although the wh-element, which Daniel accessed at this point, is more sophisticated than objects typically are at Stage 2, his acquisition of this question-type suggests that he was still relying on Stage 2 syntax.

From Philomena’s data, we see that the grammatical means for mapping the meaning of information questions are expanded at Stage 3. In processing terms, the formulator accesses wh-words in the lexicon and analyses them as heads of phrases. It then maps them from initial position in the hierarchical structure to the discourse function focus. If the wh-word operates as an object – What he take? – it functionally links the focus and object entries. In this way, the formulator starts to process non-linear order.

Session 5 (October–November):
The students again demonstrated acquisition of several question-types, but at different stages.

In story guessing and questioning the interviewer about her life, Philomena’s range of questions was further enlarged in two Stage 4 ways. She acquired yes–no inversion questions with the modal can and also copula inversion:

- Philomena: can I have a party on that day with my friend?

-Philomena: how old is baby?

In contrast, Daniel acquired the Stage 3 do-fronting question-type, albeit with quite sophisticated examples:

- Daniel: Did your mother has some s … don’t have some sickness?

He also attempted but did not acquire Aux2nd questions.

The Stage 4 developments open up new ways of expressing the meanings of yes–no questions and wh-questions. Since Philomena had previously acquired the syntax and meaning of can as a modal
auxiliary in the declarative, her move to yes–no inversion showed that she could communicate both the meaning of modality and the order of yes–no questions. She was able to do this because the formulator could analyse the argument structure of the modal as a verb with its own verbal argument (*have*) (Falk 2003), while identifying and interpreting the subject in second position. She also showed she had gained greater flexibility in expressing the syntactic meanings of copula yes–no questions and wh-questions. Although wh-words had long been able to occupy the initial position in Philomena’s questions, in this sample she showed she had moved past contractions and pronouns to put together wh-words, noun phrases and a full-base form of the copula – *is* – in the interrogative. Interestingly, this happened at a time when she was moving towards acquisition of subject–verb agreement in the copula, seen in her use of *are*.

**Session 6 (December):**
The learners again displayed extensions in their questioning, while engaging in story guessing, followed by the game Ten questions.

Both learners acquired Stage 5 Do2nd:
- Philomena: *where, where does her father going?*
- Daniel: *where is your dad?*

The acquisition of Do2nd questions at Stage 5 shows how greater complexity in the syntax gradually augmented communication of question meaning. The placement of the wh-word first and the *do* auxiliary second meant the learners could express, in addition to the meaning of the rest of the clause, the lexical information of the increasing variety of wh-words, and the categorical information of the auxiliary *do*. Morphologically, however, the senses conveyed by the *do* auxiliary are initially restricted. In Philomena’s sample, the verb was an invariant form – *does* – rather than the usual *do*. Since the reader may wonder why *does* is seen as invariant, it should be noted that this is the only form of the *do* auxiliary in this sample. Morphological variety is added step by step, a process seen in the aspectual ing-marking on the lexical verb – *going* – in Philomena’s Session 6 sample.

In these samples we see how the learners were similar and different in their acquisition of the question stages. They resembled each other in their progression through the sequence. However, they differed in their developmental styles in processing form and meaning (Dyson 2004). Philomena was more inclined to express meaning using available word order, such as do-fronting and wh-fronting, whether or not it was correct. As a result she moved more quickly through question syntax than Daniel. In contrast, Daniel was more inclined to express meaning in a manner he perceived to be more grammatical. He tended to acquire question forms only when he was closer to being able to add the grammatical features required by English, such as subject–verb agreement.

**Assessment and second-language processing**
These findings track form and meaning in the question development in two learners over one academic year. During that time, the learners gradually expanded their lexical and grammatical resources to communicatively use the questions they conceptualised. Of particular significance was their move from the lexical and intonational to increasingly complex grammatical means. While this study lends support to the developmental trajectory proposed within the stages paradigm, it also extends existing understanding. It specifies more precisely than previously how stages involve the progressive analysis of items in terms of meaning and form. The data show how learners initially communicate question meaning with the base forms of words, invariant syntax and intonation, and later, around base words, add the meanings of the arguments of verbs, interrogative order and grammatical morphology, such as aspect. The data also help explain why the examples given by Tarone and Liu (1995) should be treated with caution. Question-types are typically first used in formulaic ways, which sound like the target language but have not reached productivity in all elements. Finally, the study shows that learners do not acquire the six stages in the early months of learning a second language, as is commonly understood. By the end of one year of learning English in Australia, Philomena and Daniel had reached Stage 5 and had apparently not acquired one of the two question-types predicted at this stage – Aux2nd – or subject–verb agreement and
tense on the question auxiliary.

If stages research is compatible with meaning-oriented, communicative assessment, it could supplement current approaches to ESL testing in several ways:

1 International skill-based proficiency tests such as the International English Language Testing System (IELTS) and the Test of English as a Foreign Language (TOEFL) currently assume rather than assess questioning ability in test-takers (eg ETS 2007). If such test items were integrated into tests they would reveal if candidates consistently used pre-stage 5 questions. This would indicate that candidates were falling short of sentence-level processing, suggesting that they would find study in English difficult.

The stage research could underpin the construction of rating scales, such as the Australian secondary ESL Scales and the adult International Second Language Proficiency Rating Scale (ISLPR). These scales lack a coherent acquisition research base but, nevertheless, are presented as ‘generalisable descriptions of what learners are thought to do as their language develops in the direction of the target’ (Brindley 1998: 117). For example, in the ESL Scales (2004), Level 3 includes Stage 2 questions and some Stage 3 questions, while Level 4 jumps to Stage 6, with no specific pointers for the range of questions at Stages 3, 4 and 5.

2 Stages research could also inform grammatical guides suggested on test websites, such as the IELTS site, which tend to either ignore question formation altogether (eg Keith, Vestri Solomon and Smith-Palinkas 2008) or not recognise the processing challenges of different question-types – for example, by presenting all kinds of wh-questions in a single unit (eg Collins Cobuild Intermediate English grammar 2004).

3 Purpura (2004) suggests that stage-based test construction may be utilised by teachers wishing to assess student question development. The following suggestions are presented to assist teachers in this task (cf Pienemann 1995).

- Encourage student questions
  In many classrooms students do not have enough opportunities to ask questions.

Teachers need to create situations in which students can ask questions to the whole class, in pairs or in small groups.

- Observe student questions
  Teachers need to compare the questions that students ask in class to those aligned to the different stages of question development (see Table 1). This is not easy, partly because it is hard to focus on form rather than content, but practice will improve judgment.

- Distinguish formulaic from productive use
  Until the students have acquired a particular question-type, their formulaic questions, which tend to be ones they hear frequently, will stand out by their level of correctness. Productive questions are more error-prone but more original. For other ideas on detecting formulas, see Pienemann, Johnston and Brindley (1988: 235).

- Check the order of acquisition
  When students ask a question that seems productive, teachers need to check if they can also ask question-types at lower stages (see Table 1).

- Compare oral and written questions
  Written questions are easier to observe than oral ones and often reflect oral ones. Of course, sometimes they differ because students have more time to attend to form in writing.

- Assess the effectiveness of teaching
  Teachers should use a formative approach by conducting an oral assessment after teaching a question-type.

Conclusion
As language teachers, we can learn a great deal from learners’ questions, including their developmental stages, how long it takes to move along the trajectory, and the relationship between form and meaning in language processing. These insights should be applied to language assessment. To gain this information, teachers could apply the question assessment framework proposed above, which builds on previous research into assessing stages by showing how question meaning and form can be measured. By using this framework, teachers
could observe learners’ spontaneous questions to see whether:

- a question is **productive**
- a certain question-type has **emerged**
- acquisition of a question-type follows the predicted **order**
- a new mapping of **meaning and form** is evident.

Teachers could follow this procedure as a type of formative, criterion-based assessment. Having diagnosed the stages of their students, teachers could then select question-types to teach on the basis of learner readiness. This means choosing a question-type that matches the same, previous or next stage of the students (Dyson 2002a). Some training in such assessment and teaching would be helpful, such as that provided by Pienemann, Johnston and Brindley (1988). However, teachers using this framework would experience difficulties in reconciling their own practices with the approaches to question formation in proficiency tests. To resolve this problem, research into the relationship between the question stages and levels of proficiency should also be undertaken. While recognising the different conceptual bases of these constructs, this work could focus on ways to integrate the question stages into current tests and accompanying curriculums. These steps would equip teachers with a coherent acquisition-based approach to the assessment of question formation (cf Dyson 2002b).

**Acknowledgments**

This article was generously supported by the Research Enhancement Fund, Department of Linguistics and Psychology, Macquarie University, and benefited from very helpful comments from Louise Jansen, Yehuda Falk and two anonymous reviewers, as well as the support of Geoff Brindley.

**Note**

1 ‘Rapid Profile is a computer-assisted procedure used to assess language learners’ level of development. This is done by collecting speech samples from the learners and comparing them to standard patterns in the acquisition of the target language. Rapid Profile was developed from standard Profile Analysis (Crystal, Fletcher and Garman 1976), which was based on an interview, a full transcription of the interview and a detailed analysis of the transcript.’

**References**


What we can learn from questions: ESL question development and its implications for language assessment

BRONWEN DYSON


