

# Bottom-up Processing (BUP) for Decoding in Teaching Listening Skills: Analysis, Issues and Suggested Activities

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## Abstract

This conceptual study focuses on the importance of bottom-up processing (BUP) for enhancing EFL / ESL learners' decoding ability in listening skills. As observed by the researcher and reviewed in the literature, bottom-up processing for decoding is found to be an often-neglected area in the teaching of listening skills in the field of ELT. As a result of this, the foreign or second language learners of English are at risk in their competency in comprehending proficient speakers of English especially when they are exposed to ungraded real-life spoken English outside their regular lessons. To address this issue effectively, learners and teachers of English should be made aware of the significance of BUP in terms of different listening issues faced by learners. Moreover, the stake holders (planners, teachers, and students) should have a clear plan of action to address these issues to the benefit of learners. Sufficient awareness of the concept of bottom-up processing for decoding in listening skills, issues faced by learners due to lack of it, and a well thought out action to deal with the issues, therefore, can help learners of English to improve their listening skills and comprehension contributing to their enhanced language proficiency. The paper, therefore, incorporates the methodology of reviewing relevant literature based on the researcher's belief on the significance of bottom-up processing for teaching listening skills. Besides the analysis of the concept of BUP, the paper includes some learner issues, and it suggests some listening activities to remedy the issues.

**Keywords:** Bottom-up processing, decoding, listening issues, activities

## 1. Introduction

This conceptual and theoretical paper with a practical application focuses on teaching listening skills through bottom-up processing (BUP) to help listeners with decoding streams of English speech that they listen to, equipping teachers and their group of learners to improve their listening skills. Generally, listeners or learners of English use both top-down and bottom-up processing parallelly in real-life listening. In conventional listening lessons, the product is emphasized over the process in which bottom-up processing for enhancing decoding skills is widely unattended (MacDonald, 2020; Rachel, 2012). This is true of the researcher's experience as an ELT professional over two decades.

In fact, in a spoken language, learners listen to speech in combination of sounds (Hancock, n.d), and they are mostly unaware of decoding of those sounds through bottom-up processing. Consequently, it is not the lack of top-down processing that hinders the learners' listening comprehension, but their absence of decoding skills of a stream speech through bottom-up processing.

## 2. Research Objective

This conceptual study on *Bottom-up Processing (BUP) for Decoding in Teaching Listening Skills: Analysis, Issues and Suggested Activities* aims to gain deeper understanding of various aspects of bottom-up processing and their application in a listening skill lesson. Furthermore, the study attempts to identify different L2 acquisition challenges specific to listening skill due to less emphasis on bottom-up processing for decoding in listening lessons. Finally, the researcher tries to outline a few listening activities that can be exploited to mitigate the gap in promoting bottom-up processing for decoding in listening classrooms. Overall, this paper endeavors to create an awareness of bottom-up processing for decoding as a listening subskill among ELT professionals and learners.

### 3. Research Question

Based on the research objective the following research questions were formed.

- a) What is significance of bottom-up processing for decoding in listening lessons?
- b) What are some issues faced by learners pertaining to bottom-up processing for decoding in listening comprehension, and some suggested teaching/learning activities to address the issues?

### 4. Methodology

Most researchers find it challenging to define a widely accepted common methodology for designing and developing non-empirical conceptual studies (Jaakkola, 2020). Meanwhile, Fulmer (2012) argues that there is not a well-defined way to format a conceptual paper, but the paper contains a careful inclusion of ideas logically formed and structured to meet the theoretical goal of the paper. Hence, while there is no single best way to structure a conceptual paper, what successful papers have in common is a careful matching of form and structure to theoretical purpose of the paper (Fulmer 2012). Jaakkola (2020) mentions referring to Hirschheim (2008) and Toulmin (1958) that an outstanding conceptual paper should consist of claims, grounds, and warrants. A '*claim*' refers to the clear thesis (main idea or outcome) of the study which catches audiences' attention; a '*ground*' is the reason used to justify claims in persuading readers; and a *warrant* is the presupposition, assumption or belief that links to the claim in the research area.

As a *warrant*, the researcher from his own decades of ELT experience has observed that bottom-up processing for decoding in teaching listening is less emphasized compared to the attention given to top-down processing in listening lessons; and this belief (*warrant*) prompted the researcher to *claim* that bottom-up processing for decoding may be given due attention to promote EFL/ESL learners' listening skills. Moreover, the study made use of *grounds* such as literature review about the research thesis finding relevant features of the significance of bottom-up processing and issues faced by EFL/ESL learners because of their less awareness of it. Finally, the researcher through appropriate literature review and his own experience of setting up classroom activities suggests a few language activities that can be used to teach decoding through bottom-up processing for improving listening skill. Aims and evaluations of each activity are highlighted with procedures from the researchers' own experience and insights. The paper is concluded with some recommendations for the classroom application and future research.

### 5. Literature Review

To begin with, decoding in listening skill can be defined as a listener's conscious, deliberate and active cognitive effort to create meaning from what one hears (Cabrera, 2012). While a listener's ears hear passively, the brain listens to decode or translate code to understand their importance and meaning actively. In addition to understand verbal or spoken exchanges, the decoding as a skill is used in wide varieties of communication exchanges such as textual, non-verbal, visual, tactile, and kinetic exchanges (Ibid.). Nevertheless, the literature review focuses on only different aspects of BUP for decoding while listening to a stream of speech in English in an ELT context. The following section, therefore, summarises the researchers' review of literature analysing different aspects of BUP for decoding in teaching listening skills, and the review answers the first question (3a).

#### 5.1.1 Definition of Top-down and Bottom-up.

Listening is a cognitive process where phonemes are analysed, organised into patterns which are interpreted and understood through inference ('Listening Skills', n.d.) through top-down and bottom-up processing.

#### 5.1.2 Top-down Processing

Top-down processing refers to a cognitive process where listeners use their background knowledge to guess meanings of new words or the information that they listen to (Morley, n.d). For example, listeners use their schemata (previous knowledge) of holidaying to understand the spoken description of someone else's holidays.

#### 5.1.3 Bottom-up Processing (BUP)

BUP refers to listeners' cognitive ability to detect information by processing the pattern of linguistic phonemes that they listen without using their background knowledge (Field, 1999).

#### 5.2 Comprehensive Analysis of BUP

Richards (2016) stated that when listeners listen, they decode meaning of a message from the structure of sentences, key words, important discourse transitions, grammatical features, and pronunciation features of their listening input only. For example, listeners listen to an audio to recognize verb forms, and their language store of words and phrases to decode the grammar and meaning (Batram, 2016).

### 5.2.1 BUP for L2 Listeners

Unlike L1 listeners, L2 listeners need to be familiar with semantic features, stress patterns and sounds that vary from their L1. While L1 listeners process bottom-up cognitive decoding activities subconsciously, L2 listeners require obvious practice for the same (Siegel & Siegel, 2013). These can be achieved by segmenting speech stream into meaningful language sounds, recognizing and decoding them through BUP.

### 5.2.2 Decoding Processes in BUP

Roberts (2012) suggests five decoding processes: 1) identifying phonemes, 2) working out word boundaries, 3) managing unknown words, 4) exploiting sentence stresses, and 5) recognizing language chunks in fast speech. In addition, towards the end of decoding processes, listeners in a learning situation can compare their own mishearing with the audio transcript made available (MacDonald, 2020).

### 5.2.3 BUP for Accuracy

Nation and Newton (2009) argue that it is challenging to determine the accuracy of listeners' comprehension, and their production of linguistically accurate speeches without bottom-up processing; poor bottom-up processing prompts listeners to depend on their previous knowledge too much resulting in false guesses negatively interfering listener's listening proficiency (Lynch, 2009).

### 5.2.4 BUP for Decoding Word Boundaries Connected Speech

Decoding or BUP is made more challenging due to connected speech features (Rachel, 2012). Moreover, the pronunciation of a word is changed in connected speech based on the words around it (Table 1). This impacts the pronunciation of word boundaries due to sound changes and inclusion of new sounds ("Connected speech", n.d.) (Appendix A).

Table 1. Connected Speech Features

Features	Changes	Examples
Assimilation	/t/ to /p/	hit man /hɪp mæn/
Elision	/t/ /d/ elided	Next please /neks pli:z/
Delayed plosion	A short pause between repeated plosives /b/, /d/, /g/, /p/, /t/ and /k/	red dye, right tie
Catenation	Consonant-vowel linking	start-up /sta: tʌp/
Intrusion	/r/ /w/ and /j/	go and see /gəʊ w ənd si:/

#### 5.2.4.1 Linking /r/ and Intrusive /r/

/r/ can be classified as linking /r/ and intrusive /r/ in fast speech determined by the rhotic and non-rhotic accents of speakers (Nordquist, 2020) decoded by listeners.

#### 5.2.4.2 Weak and Strong Forms

Decoding awareness of weak forms (E.g., reduced to schwa /ə/ /ðə/) and strong forms (/i/ in stressed syllables /ði/) in a stream of speech helps listeners improve their listening skills (Roach, 2009, Nkongho & Tize, 2020).

### 5.2.5 BUP for Decoding Spoken Grammar

Spoken grammar is less rigid than written grammar (Thanh, 2015); as a result, lexical content and meaning are less emphasized in spoken grammar, but strictly used in writing. For example, unlike writing in full formal sentences, syntactic deductions and abbreviated elliptical forms are used in spoken grammar- (e.g., wanna). Carter and McCarthy (2006) argue that persons in a learning situation should listen to spoken grammar without reading from a text for listening is the medium to decode spoken grammar.

### 5.2.6 Spelling and Pronunciation

English spelling and pronunciation are not always the same. For example, decoding of the silent letters in words (calm), homonyms – same spelling, but different pronunciation (fare vs. fair) and homophones - same pronunciation, but different spelling (bear vs. bare) can help listeners' listening skill (Nordquist, 2020; Khansir & Tajeri, 2015).

### 5.2.7 Intonation, Stress and Rhythm

Intonation refers to the pitch, of words in sentences when spoken expressing emotions and underlying meaning of words. Falling intonation (WH questions), rising Intonation (Yes/No questions) and fall-rise intonation

(expressing uncertainty, request, and permission) are the three types of intonation in English Speech (Carson, 2016).

#### 5.2.7.1 Stress and Rhythm

Words in sentences are stressed and unstressed based on the meaning the speaker wants to convey in a stress timed rhythm in which functional words are often reduced, and content words are stressed. It is important for listeners to decode the stress and rhythm in a speech (Gallacher, n.d., Tolle, n.d.) to better understand it. E.g., *The **cat** **sat** on the **mat** while **eating** its **favourite** **food**.*

### 6. Issues Pertaining to BUP in ELT

The following sections include a few issues that demand BUP in English listening lessons. Each issue is derived from the analysis of BUP under the literature review (5). Eventually, sections 6 and 5 respond to the research question 3b.

#### 6.1 Lack of Learner Training in BUP (1, 5.2.1)

Generally, learners are trained in top-down processing in practicing listening due to the overemphasis given to it by course providers and teachers (MacDonald, 2020; Rachel, 2012). Consequently, learners have weak bottom-up processing skill for decoding fast speech while listening.

Training activities in decoding is inevitable (Rachel, 2012) because, from the researcher's own experience, it is known that decoding is seldom focused on enhancing listening skills. Often, learners' difficulty at listening is referred to their lack of top-down processing, and teachers give more attention to it, and tend to neglect bottom-up processing as decoding.

#### 6.2 Word Boundaries (5.2.4)

Many learners of all levels cannot decode word boundaries when they listen to fast speech because they are unaware of intruding sounds of /w/ /r/ /j/ and catenation (Millin, 2014) changing word sounds at the boundaries. This results in poor listening skill.

E.g., Do it. /duwɪt/

I am good. /aɪjəm gud/

Listening to a real-life audio story helps learners understand the importance of decoding in real-life listening, and its classroom implementation trains and prepares learners in enhancing listening skills.

#### 6.3 Textbook Listening vs. Colloquial Speech (5.4, 5.2.5)

Listening tasks in textbooks are often written and articulated clearly that learners are not exposed to spontaneous colloquial slurred speech (Karimi, 2018, Thornbury, 2005) which do not have colloquial features of speech to decode. These demand decoding skills for learners when they listen to colloquial speech in everyday documentaries, and videos outside the textbook.

As understood from the researcher's own exposure to ELT, textbook listening activities in general are graded, and colloquial slangs are seldom found in prescribed books, but in English music, movies, and television programs as in the one used in the activity (7.3) from <https://youglish.com>. These expressions may sound quite unfamiliar and unacceptable to some of the learners because they seldom use or hear these; consequently, they may not value it much.

Furthermore, though it is widely acknowledged that spoken grammar and written grammar are different (Carter and McCarthy, 2006), most listening and spoken course books and materials contain written grammar without core spoken grammatical features, and this affects learners' comprehension of everyday spoken conversations (Rashtchi & Aftali, n.d) as listening is the medium of understanding spoken grammar. More lexical units or formulaic chunks are used in spoken grammar. "Language consists of grammaticalized lexis, not lexicalized grammar. ... Receptive skills, particularly listening, are enhanced status." (Lewis, 1993, pp.vi-vii).

#### 6.4 Spelling and Pronunciation - Stress, Intonation, and Weak Forms (5.2.6, 5.2.4, 5.2.7).

Learners at all levels especially lower level ones are confused between spelling and pronunciation of some words that are not pronounced as they are spelt (Brown, 2013) (E.g. L-A-U-G-H, as /la:f/ vs. silent /f/ in T-H-R-O-U-G-H). Learners should decode this feature while listening distinguishing phonemes from spelling of such words to improve their listening skills.

L2 learners are unaware of the weak / ə / stress, and intonation (Roach, 2009, Carson, 2016) in spoken speech in English; consequently, they fail to decode these colloquial features in listening.

E.g., **Can** you swim?

Yes I *can*.

He *can* swim, too.

The pronunciation features of highlighted words (*can*) in spoken and written form can be differentiated in terms of stress, intonation, strong and weak forms especially /ə/ in fast speech with differences in meanings implied (Appendix F).

### **Suggested Activities**

With reference to the literature review and analysis of BUP and the challenges identified in section 6, the following ELT listening activities are suggested to resolve the issues. Each activity is explained with its aim, procedure, and evaluation.

#### *7.1 Learner training (6.1)*

##### **7.1.1 Aim**

To train learners and create awareness about decoding as a bottom-up processing strategy.

##### **7.1.2 Procedure**

The researcher (the teacher) explains learners the reasons for their awareness and practicing of decoding in listening. For that, he plays the video from <https://www.youtube.com/watch?v=SdajPmHcP2I> which contains features of fast speech. He selects and plays a sentence and asks learners to find out number of words in the spoken sentence or write the sentence while listening (1.8 “button up your lip. now you have been great just great”). Most learners are likely to miss reduced and weak forms. At the feedback session, the researcher lets learners know the importance of decoding from sound units in fast speech to improve their bottom-up processing skill in listening. Additionally, any decoding activities (Appendices C – I) can be exploited to train learners in decoding.

##### **7.1.3 Evaluation**

This activity can be used to train learners at all levels, and this will sound interesting and challenging to them – interesting due to the real-life natural English in the video and challenging because they are not used to decoding for listening skills, but to top-down processing. It may sound less interesting and too challenging to some slow learners due to their low English language proficiency. Another disadvantage is that some sound may appear completely strange and making no sense to listeners; however, this can be addressed by playing the specific sound in chunks again.

#### *7.2 Word Boundary Issues – Intrusion and Catenation (6.2)*

##### **7.2.1 Aim**

To raise learners’ awareness of intrusive /w/, /j/, /r/ and catenation in English fast speech in real life situation.

##### **7.2.2 Procedure**

After the initial discussion of the concept of intrusion of /w/, /j/ /r/ and catenation, the researcher plays the audio from <https://storycorps.org/stories/remembering-a-marine-who-after-serving-his-country-put-serving-veterans-first/> for gist. Then, he plays micro audio clips (from the same story) that include /w/, /j/ /r/ and catenation features and ask learners to write down what they hear helping learners to recognize the intrusive/linking sounds (Appendix G) with the help of audio transcripts.

##### **7.2.3 Evaluation**

The activity exposes learners to listen to proficient speakers and their fast speech when and where individual word boundaries are altered due to the connected speech features mentioned above (/w/, /j/ /r/ and catenation). The researcher has observed from lessons that activities incorporating real-life talk can interest learners, and this activity raises awareness of decoding, linking and catenation while listening.

#### *7.3 Textbook Listening vs. Colloquial Speech (6.3).*

##### **7.3.1 Aim**

To raise awareness of decoding slangs in natural colloquial speech in contrast to textbook listening.

### 7.3.2 Procedure

After the introduction of the topic, learners are given two sets of phrases – colloquial slangs and their textbook formal meaning (Appendix H). They match the slangs with their meanings (e.g., gonna, wanna). Learners can also be trained in the spoken version of the same instructing them to match or write colloquial expressions that they hear. Later, the researcher plays micro audios from <https://youglish.com> including slangs reviewed in the activity, and learners should identify them either by filling a closed text or circling the slang expression that they hear from the list of words/phrases provided.

### 7.3.3 Evaluation

This activity is beneficial for learners because it makes them aware of the slurred utterances and words used in the real-life speech, and learners across all levels will be sensible of decoding these features while interestingly listening to colloquial English in fast speech whenever and wherever it occurs.

### 7.4 Spelling and pronunciation - Stress, Intonation, and Weak Forms (2.2.6, 2.2.4, 2.2.7)

#### 7.4.1 Aim

To raise learners' awareness of differences between spelling and pronunciation in written and spoken forms, and introduce and practice stress, intonation, strong and weak forms.

#### 7.4.2 Procedure

After introducing the issue, learners are divided in pairs and one member is given the first handout (Appendices C & D) including all letters and sounds in English, and the second handout (Appendix E) including questions about them is given to the other student. The second member asks questions from his handout and write down the answers.

E.g., S2. How many vowels are in the written English alphabet?

S1. Five

This pronunciation activity clarifying the difference between spoken and written form can be followed up by the activity of introducing and practicing the issue of stress, intonation, strong and weak forms especially / ə / in fast speech by writing three examples.

The speech is modelled (*can* and key words stressed and *can* in the last sentence unstressed) with a rising tone as it is Yes/No question. After modelling, the researcher (the teacher) elicits the stressed and unstressed words from learners. The weak and strong forms are explained using phonetic scripts /kæn/ and /kən/, and the rising intonation is marked by an upward arrow, and learners drill it. Later, the audio consisting *can* and *can't* is played, and learners decode, and circle stressed and unstressed words. The teacher (the researcher) models and practices other sample sentences, Wh questions and statements with rising and fall-rise intonations respectively stressing on different words (Appendices F & I).

#### 7.4.3 Evaluation

The activity is learner centred (Neira, 2019) for they themselves discovers answers through interaction. Since students themselves ask questions and find answers, they become aware of differences between spelling and pronunciation helping them decode the meaning from their sounds. And from the researcher's own involvement, he understands that learners' retention and understanding is higher when they discover spelling and pronunciation issues themselves enhancing BUP for listening. In other words, this assumes that learners expect something different i.e., the pronunciation resembling the written form rather than the correct pronunciation in spoken form. This activity, therefore, helps with pronunciation of words in general particularly the trickier and more irregular ones.

The activity raises learners' awareness and practising of decoding of weak forms, stress and intonation, while modal verb 'can' is focused in this activity, other functional words are emphasized in subsequent activities. Such focused activity is effective because selected weak forms (articles, pronouns, auxiliary verbs – primary and modal, prepositions, conjunctions, or adverbs) of functions (Wenxia, n.d.) at a time should be taught to students to promote their decoding ability. In the listening process, learners are made aware of unstressed function words and stressed content words, the schwa / ə / and intonations.

## 8. Conclusion and Recommendations

Based on the above analysis of the concept of bottom-up processing (BUP) for teaching listening skills, anticipated and practical issues, and suggested activities with their aims, procedures, and evaluation to address the issues, one can conclude that ELT practitioners need to emphasize bottom-up processing in language lessons

to enhance learners' listening skills. Therefore, well designed listening activities paying attention to BUP in English language classrooms complement often used top-down processing in promoting listening skills in ELT. Proper identification and awareness of issues of BUP negatively affecting learners' listening skills and effective implementation of appropriate listening activities addressing issues can positively contribute to develop English language learners' and listeners' decoding skills through bottom-up processing in English language teaching and learning. Based on the conclusion, the following recommendations are made.

- Learners and teachers should be made aware of the significance of BUP for decoding in listening lessons.
- ELT practitioners should maintain a balanced exploitation of top-down and bottom-up processes to facilitate listening skills to learners.
- Apt activities with specific aims to address BUP issues should be planned and implemented in listening lessons.
- Selection and evaluation of each activity should be carried out to ensure effective implementation of them achieving desired aims and future improvement.
- Research oriented experimental lessons should be administrated to try and reflect on the effectiveness of BUP in listening skills from teachers' and students' perspectives.

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## Appendix A

### Speech organs and sounds

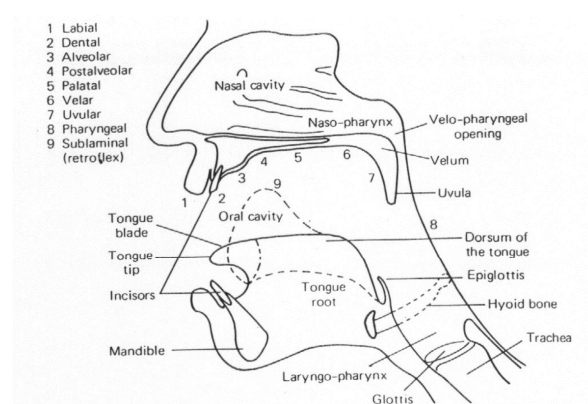


FIGURE 6.9.1 Mid-sagittal oral vocal tract showing major areas of articulation  
Adapted from: Minifie, Hixon and Williams 1973, p. 173.

Source: Clark & Yallop (1994). *An Introduction to Phonetics and Phonology*. Blackwell. p.198

TeachingEnglish													
vowels							diphthongs						
i:	ɪ	ʊ	u:	ɪə	eə								
e	ə	ɜ:	ɔ:	əʊ	aʊ								
æ	ʌ	a:	ɒ	eɪ	aɪ	ɔɪ							
consonants													
p	f	t	θ	tʃ	s	ʃ	k						
b	v	d	ð	dʒ	z	ʒ	g						
h	m	n	ŋ	r	l	w	j						



## Appendix B.

### Forms

#### B.1. Examples of strong and weak forms (Kenworthy, 1987).

		Strong	Weak
Articles	the	the /ði/	/ðə/
	a	/eɪ/	/ə/
Conjunctions	but	bʌt/	bət/
	and	ænd/	/ən/
	then	/ðen/	/ðən/
Personal pron.	him	/hɪm/	/ɪm/
Indefinitive adj.	some	/sʌf/	/səf/
	such	/sʌm/	/səm/
Preposition	of	/ɒv/	/əv/
	for	/fɔr/	/fə/
	to	/tu/	/tə/
Verbs	was	/wɒs/	/wəz
	have	/hæv/	/həv/    /əv/
	must	/mʌst/	məst/, /məs/
	do	/du:/	/də/
	does	/dʌz/	/dəz/

#### B.2. Examples of assimilation

Sound	Changes to	In front of	Examples
/t/	/k/	/k/ and /g/.	
/t/	/p/	/p/, /b/ and /m/.	football /fʊp bɔ:l/ hit man /hɪp mæn/
/d/	/g/ /b/	/p/, /b/ /m/.	good boy /gʊb bɔɪ/ good girl /gʊg gɜ:l/
/n/	/n/	/k/ and /g/.	
/n/	/m/	/p/, /b/ and /m/.	ten pin /tem pɪm/ in bed /ɪm bed/
/s/	/ʃ/ and /z/ to /ʒ/	/ʃ/	this ship /ðɪʃ ʃɪp/ these shops /ði:z ʃɒps/ /ði:ʒ ʃɒps/
/v/	/f/	/t/	have to go /hæv tə gəʊ/ /hæf tə gəʊ/
/d/	/dʒ/:	/j/	how d'you do /haʊ dʒu du:/ /haʊ dʒu du:/
/t/	/tʃ/	/j/	don't you know /dəʊnt jʊ nəʊ/ /dəʊntʃə nəʊ/

-Underhill, 1994

### B.3. Examples of silent letters

Silent letters	Examples
/l/ before /m/	Calm /kɑ:m/
/b/ before /t/	Doubt /daʊt/
/k/ before /n/	Knit /nɪt/
/g/ before /n/	gnaw
/n/ after /m/	Column /kɒləm/
/w/ before /r/	Write /raɪt/
/p/ before /s/	Psychology /saɪkɒlədʒɪ/
/b/ before /m/	Bomb /bɒm/
/b/ after /m/	Plumber /pl

## Appendix C

### Written letters and spoken sounds

#### MODULE 1.1

## Written English Does Not Have Enough Letters

James Dean Brown

<b>Levels</b>	<i>Beginner to advanced</i>
<b>Aims</b>	<i>Illustrate that there are many more sounds in English than there are letters</i> <i>Show that symbols of written English are not adequate to represent all the sounds in the language</i>
<b>Class Time</b>	<i>20–30 minutes</i>
<b>Preparation Time</b>	<i>10 minutes for duplication</i>

#### PROCEDURE

1. Put the students into pairs and tell them to look at their handout but not at the one you are going to give to the other member of their pair.
2. Pass out the handout in Appendix A to one member of each pair.
3. Pass out the worksheet in Appendix B to the other member of each pair.
4. You can make this activity competitive by offering some sort of prize to the first pair that finishes the activity with all answers correct. Make a note of the order in which pairs finish.
5. Then, go over the answers with the students (using the Answer Key provided in Appendix C). Have the pairs correct their worksheets. Make sure that all of the pairs end up with the right answers by the time they are finished.
6. Now, determine which pair finished first with 100% correct answers.

#### CAVEATS AND OPTIONS

Similar activities can be developed to answer the following questions:

1. How many of the consonant sounds in the example words in Appendix A are written with one consonant letter, and how many are written with two consonant letters?
2. How many of the vowel sounds in the example words in Appendix A are written with one vowel letter, and how many are written with two vowel letters?
3. Why are all the consonant sounds in the consonant example words in Appendix A at the beginning of the word except for *mirage* and *sing*? (Answer: English words cannot begin with these sounds.)
4. Which consonant in the consonant example words in Appendix A is not written? What does *\_uh\_oh* in the example words mean? (Answer: a signal that *something is wrong*.)

## Appendix D

### Written and spoken symbols

#### **APPENDIX D : Written and Spoken English Symbols Handout**

##### **The Letters of Written English**

The letters in written English consist primarily of the following lower-case set (vowels are in italics):

a b c d e f g h *i j* k l m n o p q r s t *u v w x y z*

##### **The Sounds of Spoken English (in IPA symbols)**

*Consonants of North American English*

/p t k ʔ b d g f θ s ʃ h v ð z ʒ ʧ ʤ m n ŋ l r w j/

<i>p</i> apa	<i>f</i> ind	zipper	<i>l</i> ook
<i>t</i> ake	<i>th</i> ink	mirage	<i>r</i> un
<i>k</i> ick	sit	<i>ch</i> icken	<i>w</i> in
<i>_uh _oh</i> (glottal stop)	<i>sh</i> e	<i>J</i> ack	<i>y</i> ou
<i>b</i> oy	<i>h</i> e	<i>m</i> an	
<i>d</i> og	<i>v</i> iew	<i>n</i> one	
<i>g</i> o	<i>th</i> is	<i>s</i> ing	

*Vowels of North American English*

/i ɪ e ɛ æ ʌ ə a ɔ o ʊ u/

beat	bet	but I don't	boat
bit	bat	body	book
bait	butter	bought	boot

*Diphthongs of North American English*

/ai/ /oi/ /au/

buy	boy	bow
-----	-----	-----

[https://www.tesol.org/docs/books/bk\\_NW\\_ConnectedSpeech\\_769](https://www.tesol.org/docs/books/bk_NW_ConnectedSpeech_769)

## Appendix E

### Worksheet- Sounds

#### APPENDIX **Written and Spoken Symbols Worksheet**

**DIRECTIONS:** Ask your partner each of the following questions and answer in the space provided.

1. How many vowels are there in the written English alphabet? \_\_\_\_\_
2. Written consonants? \_\_\_\_\_
3. Spoken consonant sounds? \_\_\_\_\_
4. Spoken vowel sounds? \_\_\_\_\_
5. Spoken diphthong sounds? \_\_\_\_\_
6. How many sounds total are there in spoken English? \_\_\_\_\_
7. How many letters total are there in written English? \_\_\_\_\_
8. How many more sounds are there in English than there are letters? \_\_\_\_\_
9. How is that possible? \_\_\_\_\_  
\_\_\_\_\_
10. List at least five examples of words where two written vowels become one sound in English. These five should show completely different vowel combinations.  
\_\_\_\_\_  
\_\_\_\_\_

#### APPENDIX **Written and Spoken Symbols Worksheet**

##### **Answer Key**

1. 5    2. 21    3. 25    4. 12    5. 3    6. 40    7. 26    8. 14
9. Possible answers: (a) *Some written letters are pronounced in several different ways.* (b) *Some combinations of written letters produce a new pronunciation.* (c) *Some sounds are not ever written e.g., /ʌ ə ʔ /*
10. Example answers: *view, road, bread, book, seek, caught*

[https://www.tesol.org/docs/books/bk\\_NW\\_ConnectedSpeech\\_769](https://www.tesol.org/docs/books/bk_NW_ConnectedSpeech_769)

## Appendix F

### Exercise for Stress and Weak forms

▲ **Presentation and controlled practice:** First, the teacher writes three sentences on the blackboard:

1. Can you swim?
2. Yes, I can.
3. He can swim, too.

and says them out loud focusing on 'can', - /kæn/ is used in the first two sentences, while the weak form /kən/ is used in the third sentence.

Phonetic symbols are used to distinguish the sounds /kæn/ and /kən/

*Note: In the initial or final position of a sentence, the strong form of function words will usually be used even if it is unstressed*

Students recognize the sounds.

Drilling of TL – This helps learners

Substitution Drilling of TL – choral and individual drilling ((Kelly 2000).

Students' listen to TL to identify the weak and strong TL.

### Pronunciation

#### Can/Can't

The words can and can't have very similar pronunciations, but they receive different stress in a sentence. Usually, can is not stressed, so the vowel receives a reduced pronunciation. Listen to the difference:

*I **can** speak three languages.*  
*We **can't** find our new classroom.*

Paying attention to this difference can help you understand these words better.

Listen to these sentences from the conversation again and complete them with can or can't. Then take turns reading them to a partner.

1. But I \_\_\_\_\_ also see that I disagree with her about a lot of things.
2. A small woman \_\_\_\_\_ lift more than 20 pounds.
3. And a woman athlete \_\_\_\_\_ lift 200 pounds.
4. \_\_\_\_\_ all men lift 200 pounds?
5. I \_\_\_\_\_ imagine why the airlines didn't want men.
6. Men \_\_\_\_\_ lift heavier bags for the passengers.

#### Student to Student: Greeting a Friend after a Long Time

Wow, I haven't seen you in ages! Hey, stranger! Long time, no see! (informal idiom)

Pathways 3 Listening and Speaking Page. 17. <https://bookshelf.vitalsource.com/#/books/9781285434438/cfi/6/64/4/2/2/2/2@0.00:43.9>

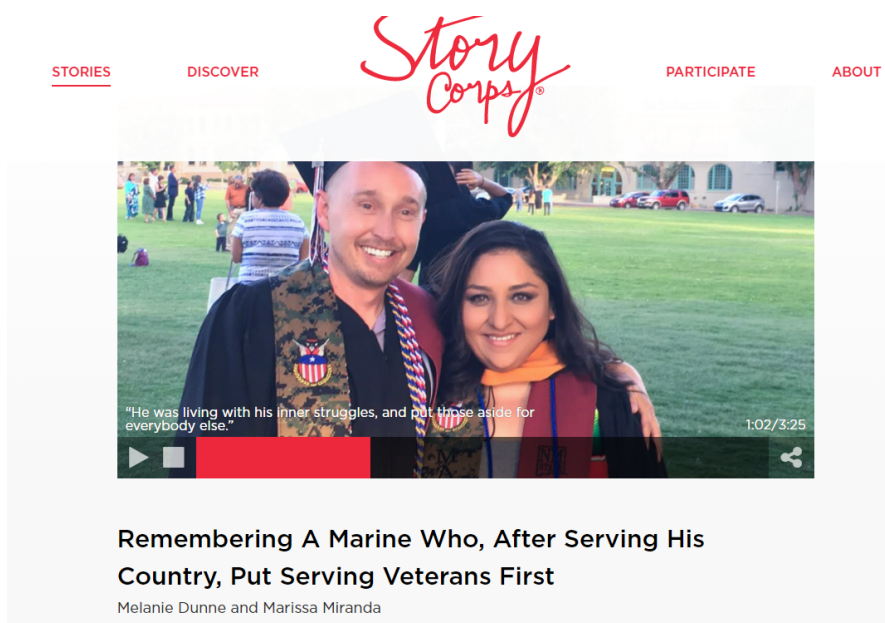
**Communicative practice:** The following three-step activity is implemented focussing on TL - can

1. In pairs, students interview each other about what special skills each of them has.
2. If the initial questions are not adequate for the students to get a comprehensive idea of the special abilities of his/her partner, the student being interviewed should provide more information voluntarily.
3. Students report to the whole class what abilities his/her partner has.

Sources: 1. Willis, (n.d.). *Teaching Weak Forms*. [http://www.geocities.ws/mhdrba/teaching\\_weak\\_forms.htm](http://www.geocities.ws/mhdrba/teaching_weak_forms.htm) 24.6.2021  
 2. Pathways 3 Listening and Speaking Page. 17. <https://bookshelf.vitalsource.com/#/books/9781285434438/cfi/6/64/4/2/2/2/2@0.00:43.9>

## Appendix G

### Exercise for Word boundaries and linking



STORIES DISCOVER *Story Corps* PARTICIPATE ABOUT

"He was living with his inner struggles, and put those aside for everybody else." 1:02/3:25

**Remembering A Marine Who, After Serving His Country, Put Serving Veterans First**

Melanie Dunne and Marissa Miranda

<https://storycorps.org/stories/remembering-a-marine-who-after-serving-his-country-put-serving-veterans-first/>

#### TRANSCRIPT

**Melanie Dunne (MD) and Marissa Miranda (MM)**

**MM:** I don't even consider him like a brother in law. He was my brother. I spoke with him all the time.

Even though, when you were having the most serious conversation with him, he always found a way to just say something really stupid, but then laugh. And he'd give **you a hug** and say, 'I love you.'

**MD:** Yeah.

**MM:** 'It's going to be fine.'

**MM:** We knew he loved helping other veterans and, you know, he was always encouraging veterans to go back to school to keep up their education. Even when they wanted to give up, he was right there saying, 'Let's go have lunch,' and doing whatever he could. He wanted to be a social **worker and** a counselor —

**MD:** — which he had worked so hard for. And we graduated from the same program on the same day. And I remember that morning, he was prancing around through the house with his cap and gown on. But he was so nervous because his PTSD and anxiety and fear was like, this is a large group of people, this is a stadium. But he was like, 'I can do this.'

**MM:** He was very **loud and** boisterous.

## Appendix G

### Quiz - linking

<https://www.englishclub.com/pronunciation/linking-quiz.php>

\*\*\*

## Linking Quiz


You can do this quiz **online** or **print it** on paper. It tests your understanding of **Linking** in English pronunciation.

1. When speaking, we can often link a word with another word that is

- ☐ anywhere in the same sentence
- ☐ directly before or after it

2. Linking occurs mostly when words ending with a vowel or consonant sound are followed by words that begin with

- ☐ a vowel sound
- ☐ a consonant sound



## Appendix H

### Colloquial vs. standard expressions

‘‘The 70+ Most’’. (n.d.). The 70+ Most Common English Slang Words & Phrases.

<https://takelessons.com/blog/american-english-slang-words>

Conversational slangs		
1	1. What’s up? – Hey. “Hey Tom! What’s up?” “Not much!”	what are you doing?
2	I feel you: “I feel you. That was really unfair.”	I understand and empathize with you
Descriptors		
3	Laid back/ Chill: “This weekend was very laid back.”	Relaxed or calm.
4	Sweet/ Cool: “I passed the test!” “Sweet!” / “Cool”	Fantastic
People & relationship		
5	Babe: “Hey babe!” or “She’s a babe.”	Your significant other; an attractive individual
6	Have a crush: “I have a big crush on him.”	Attracted to someone romantically.
American Slang for Social Events		
7	Hang out: “Want to hang out with us?”	To spend time with others.
8	I’m down: “I’m down for ping pong.” I’m game / I’m in	I’m able to join.
More from British Slangs		
9	Alright? ‘Alright mate’ – ‘Alright’.	<i>This is a greeting, comprising ‘all right’, as in; ‘is all right with you?’. It is usually said as a question. An acceptable response would be to mimic the greeting;</i>
10	Ace	<i>Positive exclamation, equivalent to ‘great!’ or ‘Awesome!’</i>

For more colloquial speech Expressions: Source:

<https://www.ecenglish.com/en/social/blog/brighton/2019/05/20/british-slang-list-colloquial-words-phrases>



## Appendix I

### Exercise to Teach Stress and Intonation

#### Activity 1. Get the class speaking.

Step 1. Write on WB ‘’ “I didn’t steal your blue wallet”

Step 2. Teacher reads the sentence aloud with stress, and asks students read it aloud.

Step 3. Practice saying the sentence with a distinct stress on a different word each time; and check students can tell which word is being stressed, and how that affects the overall meaning.

Step 4. Encourage learners to put some emotions behind the delivery intonating the sentence.

#### Activity 2. Worksheet Activity

Step 1. Give a worksheet of sentences to each student, and teacher should keep a copy with one word in each sentence underlined.

Step 2. Teacher reads each sentence aloud, and students underline the stressed word.

Step 3. After teachers’ reading, students take turns reading stressing underlined word in each sentence.

Step 4. Additional worksheets with new words/ phrases underlined can be given to students.

Source: George, M. (n.d.). *Five Ways to Teach Stress and Intonation*  
<https://www.listenandlearn.org/the-teachers-handbook/5-ways-to-teach-stress-and-intonation/>

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