

## Advantages of using web-based materials as a source of data for student assignments

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Tips & tricks for teaching linguistics with technology  
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## aim

### to demonstrate:

- how materials in an online database can be used as input data for students to analyse in an assignment
  - case study: coursework assessment Phonetics & Phonology, core unit MA Applied Linguistics at Birkbeck College
- the advantages of using open-access online materials in this way
  - mapping to learning outcomes of the course
  - student experience
  - 'authentic assessment'
- how the methodology could be used in other linguistics-related learning situations

## outline

### the assignment:

- the source materials
- design of the task & implementation

### discussion:

- successful mapping to learning outcomes?
- the student perspective
- is this 'authentic assessment'?

### conclusions:

- reproducing the methodology

## the assignment

### context:

- half-unit in Phonetics & Phonology
  - ten week course
- MA Applied Linguistics programme
  - also MA Bilingualism, MA Translation Theory
- Birkbeck College
  - mature/reflective students
- coursework only assessment
  - 2 x in-class tests/short assignments
  - 2000 word essay

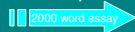
## the course

### learning outcomes of the course:

on completion of this course you will be able to..

- basic phonetics skills
  - describe the speech sounds of your own and other languages accurately in articulatory terms
  - recognise and use symbols of the IPA for your own and other languages
  - interpret the basic features of acoustic representations of speech sounds (spectrograms)
- basic phonological skills
  - identify phonological alternations in a dataset and formulate rules to describe how they arise
  - identify cross-linguistic syllable structure differences and predict the shape of loanwords
- relate real world linguistic problems to relevant aspects of phonetic and phonological theory

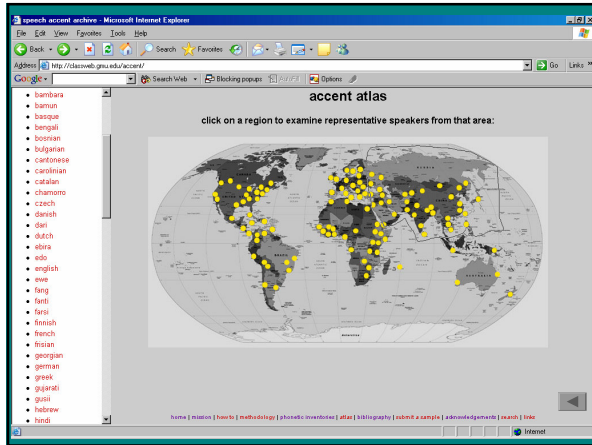
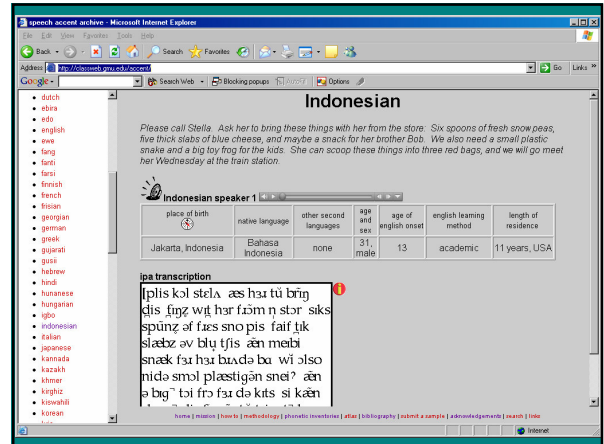
phonetics test  
phonology test



## the source materials

### an online database:

- the 'Speech Accent Archive'
  - <http://classweb.gmu.edu/accents/>
  - an archive of recordings from L2 learners of English from over 80 different language backgrounds
  - with basic analysis of speech errors



## the source materials

### open access materials

- free to:
  - copy, distribute, display, and perform the work
  - make derivative works
- provided:
  - attribution is made
  - non-commercial use

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## the source materials

**sample data**

Please call Stella. Ask her to bring these things with her from the store: six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go meet her Wednesday at the train station.

[pɪs kəl stɛlɔ æs hɜ:tʊ brɪŋ dɪs fɪŋz wɪt hɜ: fɔ:m ɪ stɔ: sɪks spʊnz əv fæ:s snəʊ pɪs faɪf tɪk slæbz əv blʊ tʃɪs æn meɪbi snæk fɜ: hɜ: bʌdə bɑ wɪ əlso nɪdə smɔl plæstɪgən sneɪ? æn ə bɪg tɔɪ frɔ fɜ: də kɪts sɪ kæn skʊp dɪs fɪŋz ɪntʊ tʃɪ æt bægz æn wɪ wɪl go mɪt hɜ: wɛnzdeɪ ærə tɹeɪn steɪʃən]

## the source materials

**Indonesian speaker from Jakarta: [r] & [ɹ]**

Please call Stella. Ask **he** to bring these things with **he** f om the store: Six spoons of f esh snow peas, five thick slabs of blue cheese, and maybe a snack fo **he** b other Bob. We also need a small plastic snake and a big toy f ro g for the kids. She can scoop these things into th **ee** red bags, and we will go meet **he** Wednesday at th **t**ain station.

**green symbols** = potential areas for trilling  
**red symbols** = actual areas of trilling

Indonesian phoneme [r] produced instead of English phoneme [ɹ]

phonetically driven error

## the source materials

Indonesian speaker from Jakarta: stop devoicing

- Please call Stella. Ask her to bring these things with her from the store: Six spoons of fresh snow peas, five thick slices of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go meet her Wednesday at the train station.

green symbols = potential areas for final devoicing

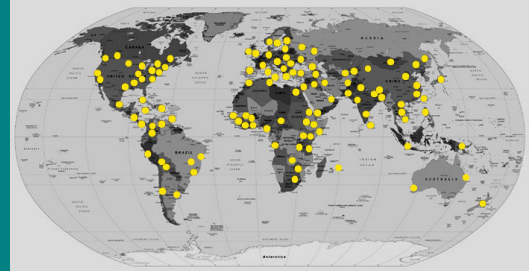
red symbols = actual areas of final devoicing

Indonesian process (final stop devoicing)  
applied to English vocabulary

phonologically  
driven error

## the source materials

data from speakers of over 80 languages:



## the source materials

the website offers:

- parallel presentation of speech materials
  - in over 80 languages

for each speaker:

- sound file
- IPA transcription
- generalisations
  - phonetic
  - phonological



## the task

aim of the assignment:

"relate real world linguistic problems to relevant aspects of phonetic and phonological theory"

- note that:
  - basic phonetic & phonological skills tested elsewhere
  - advanced skills in phonetic transcription or phonological analysis are not the primary learning outcome of the course
- the 'ready-made' materials of the Speech Accent Archive permit the assignment to focus on the actual learning outcome
- > application of acquired basic skills to real word data

## version 1

- The aim of this assignment is for you to demonstrate your ability to relate a problem in the real world (L2 learner errors in English) to relevant aspects of phonetic and phonological theory.
  - ie you will need skills from both halves of the course to complete the task
- You should start by obtaining a small dataset of English speech spoken by an L2 learner of English whose mother tongue is a language of your choice. You can find data of this sort on The Speech Accent Archive (<http://classweb.gmu.edu/accent/>).
  - if you have difficulty downloading this information please let me know and I will make copies on disk for you

almost all of this information is found on the website

## version 1

- choose *at least three error types* in the dataset to analyse in depth:
  - eg one involving consonants, one involving vowels, and one involving syllable structure
  - list possible explanations for each error with reference to the phonetic or phonological properties of the speaker's mother tongue
- undertake *more detailed research of one of these* phonetic or phonological properties; either:
  - 1 phonetic property with two possible phonetic explanations OR
  - 1 phonological process analysed in two different phonological theories OR
  - 2 properties/processes with one explanation/analysis each

you will **not** find this information on the website! this is the heart of the assignment – to look for explanations (your own &/or from published sources)

## version 2

- This assignment requires you to “analyse two small datasets of *speech in English* produced by L2 learners of English from the “Speech Accent Archive”  
<http://classweb.gmu.edu/accent/>
  - This website is an archive of recordings from L2 learners of English from over 80 different language backgrounds, with analysis of their speech errors.
- Choose *two* datasets from the archive to analyse.
  - They must *not* both be from one dialect.
- You can choose EITHER:
  - i) datasets from **two different languages** (A and B); OR
  - ii) datasets from **two dialects** (A and B) of the **same language**.

## version 2

### suggested outline:

- introduction
  - where is the language spoken? how many speakers?
- analysis (body of the assignment)
  - phonetic analysis of the data
  - phonological analysis of the data
- discussion
  - explore one or more aspects further
  - in the light of a literature search
- conclusion
  - avenues for further investigation
- appendix
  - IPA transcription of dataset
  - consonant & vowel inventory for the languages
- bibliography
  - including websites (*date of retrieval!*)

## version 2

### suggested strategy for phonetics analysis (=“Task 1”):

- Use the phonetic inventories provided on the website as a resource
  - you may supplement them with phonetic inventories that you find from other sources if you wish
- Compare the vowel and consonant inventory of:
  - language/dialect A to English
  - language/dialect B to English
- What errors do you predict learners to make as a result of your comparisons?
  - note especially differing predictions for A vs. B
- Are there any examples of these errors in the datasets?
  - if yes, please give examples
  - if no, what errors occur which you did not anticipate (examples!)

Use the website to identify phonological processes in your chosen languages

## version 2

→ choose *one* phonological process to explore in detail

### suggested strategy for phonology analysis (=“Task 2”):

- Provide a description of the phonological process you have identified.
  - include a generalisation *in words* of the ‘rule’ and of the context(s) in which it applies.
  - supplement the information from the website with material from other sources where possible.
- Compare the application of the phonological process as it occurs (or doesn’t occur) in:
  - language/dialect A vs. English
  - language/dialect B vs. English
- What errors do you predict learners to make as a result of your comparisons?
  - note especially differing predictions for A vs. B
- Are there any examples of these errors in the datasets?
  - if yes, please give examples
  - if no, what errors occur which you did not anticipate (give examples)

## implementing the task

### ‘grade the task not the text’:

- the task had to be very clearly described
  - new task each year to meet external examiner requirements
- accessibility issues
  - sample source materials as in class example
  - source website demonstrated in class
  - materials downloaded to CD if requested
  - software compatibility issues

## the results

- successful assignments
  - the majority of students performed well
  - varied grade range
    - strong students able to excel
    - weak students not penalised
  - diverse range of languages/themes explored
    - > evidence of student autonomy
- ease of comparison between students
  - parallel task, parallel structure of source materials
  - tutor access to source materials to check claims

## discussion

### successful mapping to learning outcomes?

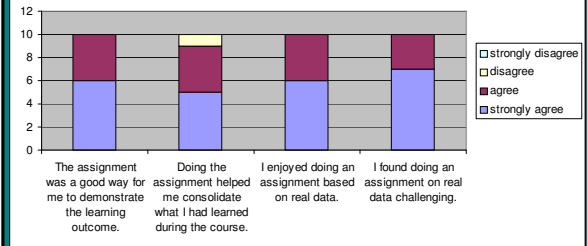
- “good assessment starts with clear learning outcomes”
  - an assessment for Applied Linguistics students should involve *application* of skills acquired
- “use assessment to direct student learning”
  - students spent their time doing what I wanted them to do
  - > develop and demonstrate their ability to *interpret* the information on the website

“We got to do an L2 assignment without all of the stress of finding a native speaker and recording him/her ourselves which takes up time and there is the ethical side to consider. It allowed us to focus on the research and data and not be distracted by the data gathering which is time consuming for this type of course.”

Baume 2004

## discussion

### the student perspective:

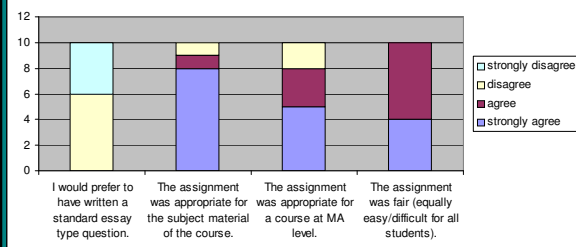


survey sent to 18+12 = 30 students

7+3=10 responses

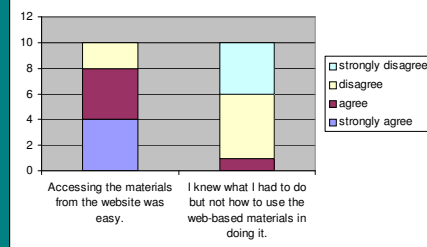
## the student perspective

### suitability of the assignment/task:



## the student perspective

### accessibility:



“For those with difficulty getting to a computer, the assignment was frustrating at times.”

## discussion

### the essential elements of ‘authentic assessment’:

- context
  - **fidelity of context** to reflect conditions under which performance will occur (rather than contrived, artificial, decontextualised conditions)
- students’ role
  - requires students to be **effective performers with acquired knowledge** and to craft polished performances or products
    - requires significant student time & effort in *collaboration* with others
- authentic activity
  - involves complex, **ill structured challenges** that require judgement and a full array of tasks
    - requires the **assessment** to be seamlessly **integrated with activity**
- indicators
  - provides **multiple indicators** of learning
    - achieves **validity & reliability** with appropriate criteria for scoring varied products

Herrington & Herrington 1998

## discussion

### context:

- fidelity of context rather than contrived, artificial conditions
- “It was a new way of looking at data and I am very glad that I had the opportunity to learn how to complete the task. It also meant that we were really involved in an analysis process, which we may do in the future in the real world.”
- “Enjoyed listening to different accents and being able to compare and contrast using newly acquired information; hearing differences that weren’t apparent before taking the class and being able to read along with the phonetic transcriptions.”
- “Practical, not theoretical.”
- “Helpful because authentic data.”

## discussion

### student role:

- effective performers with acquired knowledge
- “Doing the assignment helped me to connect the theories and real data. It’s more interesting. In addition, students are from different countries, they are all interested in different languages. It’s a good way to help me to understand more about the languages that I am interested.”
- “Became aware of useful online sources of information and data. Got used to downloading and using the resources. Enjoyed applying it to my own language of interest. Challenged me in applying theories to real data.”

## discussion

### authentic activity:

- ill-structured challenges and assessment integrated with activity
- “I did find the assignment difficult at first but once I continued to study it, I became quite enthusiastic with the challenge. I learnt a tremendous amount and even though I may not have analysed everything correctly, I would enjoy completing such work again”
- “The Japanese speakers were relatively advanced learners and there were almost no consistent errors in their English phonology, and therefore it was hard to apply the theories. However, this was interesting in itself.”
- “The generalisations/phonetic inventories on the website often didn’t match up with material found elsewhere, or even sometimes with first hand experience”

## discussion

### indicators:

- validity and reliability, from multiple indicators of learning
- “It was a really stimulating task. I was glad to have a structure within which to work, but also the flexibility to pursue directions that particularly interested me.”
- “The essay was really original, we had complete freedom in composing it.”
- “Given the amount of the material to cover it was hard to keep within the word count without taking shortcuts or leaving things out.”
- “The informant on the web didn’t make enough errors to expand upon in as much detail as I would have liked. His English was almost too good to examine in depth. The interlanguage was not as rich as I would have liked to analyse.”

conclusion: a hybrid, some ‘authentic’ qualities, scope for improvement

## reproducing the methodology

### other potential source materials:

- online databases
  - the IVIE corpus
    - <http://www.phon.ox.ac.uk/~esther/ivyweb/search.html>
  - UCLA Language Materials Project
    - <http://www.lmp.ucla.edu/>
- materials available for download
  - CHILDES materials
    - <http://childes.psy.cmu.edu/data/>
  - The Survey of English Usage, UCL
    - <http://www.ucl.ac.uk/english-usage/>
  - UVa Electronic Text Center
    - <http://etext.lib.virginia.edu/collections/languages/>
- other potential tasks:
  - speech materials could be used at earlier stages of the course also eg to test basic phonetic & phonological skills

## issues to address

### task design:

- students are not used to being ‘given the answers’
  - they need help to see that they are being asked to do more than re-package information
- students are not used to ‘real’ linguistic analysis
  - break task into chunks as a training exercise
  - excellent research training
- accessibility issues are crucial
  - web/computer access
  - software compatibility
- accuracy of source materials
  - not always 100% consistent (eg open contributory basis)
  - BUT tackling ‘ill-structured materials’ > authentic assessment

## thank you!



### Thanks to:

- the students of MA Applied Linguistics Birkbeck College 2003-4 & 2004-5
- Marjorie Lorch, programme convener MA Applied Linguistics, Department of Applied Linguistics, Birkbeck College

### References:

- Baume, David (2004) *Writing effective exam papers*. SOAS Learning & Teaching Unit seminar.
- Herrington, J. & A. Herrington (1998) Authentic assessment and multimedia: how university students respond to a model of authentic assessment. *Higher Education and Development*, 17 (3), 305-322.