Input-Enhancement in Teaching English to Deaf and Hard-of-Hearing Students

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Conference on Teaching English to Deaf and Hard-of-Hearing Students at Secondary and Tertiary Levels in the Czech Republic
Charles University, August 22-27, 2004
Abstract

In this lecture the presenter reviews the role of *input* in language acquisition and discusses the “Focus-on-Form” teaching methodology known as "input enhancement." He illustrates his use of a coding system for focusing deaf students’ attention on their production of specific English language formations. This implicit corrective feedback serves to enhance the English input available to the deaf students. The presenter advocates the use of visual input enhancement with deaf students, especially in view of their reliance on visual processing.
A Simplified Model of First Language Acquisition

Input to L1 Learner (Child)

- Innate Capacity for Language
  - “Universal Grammar”

- Emerging Grammar
  - (Stages of Acquisition)

- Adult Grammar
A Model of Second Language Acquisition

Based on Gass (1997), *Input Interaction and the Second Language Learner* (ch. 1)

- **Input** - the linguistic data (sentences) directed at the learner
- **Noticed input (apperception)** - recognition that there is something to be learned; a priming device that prepares the input for further analysis
- **Comprehended input** - levels of the learner’s understanding of the input along a continuum (from semantics to structural analysis)
- **Intake** - selective processing and assimilation of linguistic material (matched against prior knowledge); generalizations occur
- **Integration** - hypothesis confirmation or rejection ~ hypothesis modification for further confirmation ~ non-use of the input
- **Output** - overt manifestation of the acquisition process; produced output can serve as feedback to the **intake** component for hypothesis modification
A Model of Second Language Acquisition

Input to L2 Learner

Noticed Input

Comprehended Input
   Universals
   Prior Linguistic Knowledge

Intake
   Hypothesis Formation,
   Testing, Rejection,
   Modification, Confirmation

Integration
   Storage ➔ Grammar

Output

From Gass (1997), pp. 2-7 (modified)

Noticed material; prepares input for further analysis

Input undergoes analysis

Assimilation of linguistic material; generalizations occur

Development of L2 grammar ~ delay for future integration ~ non-use

Manifestation of acquisition ~ provides feedback to Intake Component
English Language Learning by Deaf and Hard-of-Hearing Learners in a **Czech-Speaking** Community

**Other Linguistic and Developmental Influences**
- Age of onset and degree of hearing loss
- Early or late exposure to Czech language input
- Early or late exposure to Czech Sign Language (if at all)
- Interference/Transfer from Czech and/or Czech Sign Language
- Quality of English language learning environment

**Model based on Gass (1997), pp. 2-7**

- Restricted auditory input
- Compensatory visual input
- Input noticed and prepared for analysis
- Input undergoes analysis (universals <-> prior linguistic knowledge)
- Assimilation of linguistic material; generalizations occur
- Development of target grammar or delay for future integration or non-use
- Manifestation of acquisition or feedback to Intake Component
Deaf Learners and Spoken Language Input

- The English language input available to deaf and hard-of-hearing learners (especially severely and profoundly deaf learners) is degraded and severely limited.

- Deaf learners of English, Czech, or any spoken language rely on vision, to varying extents and sometimes exclusively, for compensatory linguistic input.

- “Input Enhancement” and other “Focus-on-Form” L2 teaching methodologies can use visual processing to enhance the spoken language input available to the language learner.

- These methodologies serve to focus the learner’s conscious or unconscious attention on the input within communicative learning environments (focus on FORM, not focus on FORMS in isolation!).

- Can input enhancement and similar L2 teaching methodologies make English language input more “noticeable” to deaf and hard-of-hearing learners?

- If so, will the more noticed input facilitate input comprehension, input processing and hypothesis formation, integration of linguistic knowledge, and more target-like output by deaf and hard-of-hearing learners?

- In seeking to help deaf and hard-of-hearing students improve their English literacy skills, we MUST experiment with new teaching methodologies.
Focus on Form in Second/Foreign Language Teaching
From Doughty and Williams (1998)

- **Input flood** - Flooding learners with specific forms of the target language in order to draw learners’ attention to the input

- **Task-essential language** - classroom activities designed to elicit specific linguistic features from learners

- **Input enhancement** - making input more noticeable by “flagging” target items to draw learners’ attention to them (using bold type, italics, underlining, color, presentation of rules, etc.)

- **Negotiation** - structure-focused interaction and requests for clarification designed to call attention to a specific target language form; students correct each other

- **Recast** - guiding or directing learners to notice discrepancies between their emerging grammars (“interlanguage”) and the target language; reformulation with correction

- **Output enhancement** - requesting clarification from a learner that leads the learner to produce a specific grammatical feature
Focus on Form, continued  (from Doughty and Williams, 1998)

- **Interaction enhancement** - interactive problem-solving tasks using scenarios to create contexts that guide learners to use the target language in realistic discourse

- **Dictogloss** - a procedure that encourages learners to reflect on their own output: the teacher reads a short text to students, who write down familiar words and phrases; then students work together to reconstruct the text from their shared resources; students’ versions are compared and analyzed

- **Consciousness-raising tasks** - making the learners aware of new target language items or rules by highlighting them in the input (but not necessarily encouraging their production right away); example: fill in the blanks

- **Input processing** - helping learners to develop recognition and understanding of a grammatical form through clear examples and explanations without requiring learners to produce the form

- **Garden path** - leading learners to make overgeneralization errors and then pointing out the overgeneralization as soon as the error is made (providing corrective feedback)
He has been lame in one foot from his birth. That is why he has only killed cattle. Now the villagers of the Waingunga are angry with him, and he has come here to make our villagers angry. They will scour the jungle for him when he is far away, and we and our children must run when the grass is set alight.

Od narození je na jednu nohu chromý. Proto taky zabíjí jenom dobytek. Vesničané od Vaingangy se na něho zlobí a teď nám přijde rozzlobit ještě naše vesničany. Široko daleko budou po něm v džungli slídit, a my abychom i s dětmi utíkali před zapálenou trávou.

(Kačenka, 1998)
Input Enhancement for Deaf and Hard-of-Hearing Students

Learner-Generated Focus on Form

- Student production of topic-generated **writing sample**
  - Experiential
  - Communicative

- Use of an English coding system to **focus on student output**
  (Berent, Brown, & Whitehead, 2002)
  - Fixed set of English formations
  - Attention drawn to successful (+) and unsuccessful (-) formations

- Coded forms serve to **enhance input** of target formations
  - Focus on grammatical and ungrammatical input
  - Implicit corrective feedback

- Students’ **reformulation** of their original output
  - First revision - Focus on correction of formations A, B, C …
  - Second revision - Focus on correction of formations F, G, H …
## Grammar for Academic Writing II

### Target Formations

<table>
<thead>
<tr>
<th><strong>Tense</strong> (TNS)</th>
<th><strong>Passive</strong> (PAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>past ~ present</td>
<td><em>be</em> + VERB-<em>en</em></td>
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</table>

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<thead>
<tr>
<th><strong>Infinitive</strong> (INF)</th>
<th><strong>That-complement</strong> (THAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>to</em> + VERB</td>
<td><em>that</em> + SUBJECT + VERB</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Progressive</strong> (PROG)</th>
<th><strong>Adverbial Clause of Time</strong> (ADVC/T)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>be</em> + VERB-<em>ing</em></td>
<td><em>when/after...</em> + CLAUSE</td>
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</tbody>
</table>

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<thead>
<tr>
<th><strong>Participle/Gerund</strong> (PPL, GER)</th>
<th><strong>Adverbial Clause of Reason</strong> (ADVC/R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERB-<em>ing</em></td>
<td><em>because</em> + CLAUSE</td>
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</tbody>
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<tr>
<th><strong>Modal</strong> (MOD)</th>
<th><strong>Relative Clause</strong> (REL)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>will, must, etc.</em> + VERB</td>
<td>NOUN PHRASE <em>who/that/which ...</em></td>
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<tr>
<th><strong>Perfect</strong> (PERF)</th>
<th><strong>Auxiliary do</strong> (DO)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>have</em> + VERB-<em>en</em></td>
<td><em>don’t, didn’t</em> + VERB</td>
</tr>
</tbody>
</table>
We **got know** each other and **hang out** every weekend. I **would** never **forget** that he **was hooked up** with one of his friends **to go out** date.

He **was** in the town and **came** over to my house and **told** me that he **moved** back to Michigan and **considering to go** NTID college this fall of 2003.

When I **arrived**, everyone __ already in their gown. All seniors **must notice** that I’m **late** because they **keeping throw** a glares at me.
We +TNS got -INF know each other and -TNS hang out every weekend. I -MOD would never forget that he -TNS was hooked me up with one his friend +INF to go out date.

He +TNS was in the town and +TNS came over to my house and +TNS told me that he +TNS moved back to Michigan and -PROG considering -INF to go NTID college this fall of 2003.

When I +TNS arrived, everyone -TNS [ ___ ] already in their gown. All seniors +MOD must -PERF notice that -TNS I’m late because they -TNS keeping -GER throw a glares at me.
Expected Student Revision with Correction of Unsuccessful Verb Formations

We got to know each other and hung out every weekend. I will never forget that he hooked me up with one of his friends to go out. Date.

He was in the town and came over to my house and told me that he moved back to Michigan and was considering going NTID college this fall of 2003.

When I arrived, everyone was already in their gown. All seniors must have noticed that I was late because they kept throwing glares at me.
Overall Group Production of Target Formations in First Essay (Week 1) and in Last Essay (Week 10)

“Grammar for Academic Writing II”

- 19 NTID undergraduate students
- 1 hour of grammar instruction per week for 10 weeks
Group Changes in Production of Target Formations Between First Essay (Week 1) and Last Essay (Week 10)

Grammar for Academic Writing II (N = 19)
Percentage Change Per Student in Overall Successful Production of Target Formations Between First Essay and Last Essay

Changes in Successful Productions Per Student Between First and Last Essay
Students Showing Most and Least Improvement

**Student “O” (+24%)**
- Improved accuracy on 6 formations
- Accurately produced 3 new formations
- Decreased accuracy on PROG
- No production of PAS

**Student “D” (-11%)**
- Decreased accuracy on TNS and INF
- Accurately produced 3 new formations
- Sustained accuracy on THAT
- No production of 4 formations
Conclusion

- Deaf and hard-of-hearing students’ slow progress in English language development is the result of:
  - Severely restricted access to spoken language input resulting from hearing loss
  - Difficulty *noticing* available English language input
- Deaf and hard-of-hearing learners receive compensatory English language input through the visual channel.
- Solution - Enhance the visual English language input available to students to the greatest extent possible:
  - Experiment with “Input Enhancement” and other “Focus-on-Form” L2 teaching methodologies.
  - Employ these methodologies in a communicatively rich English teaching/learning environment.
  - Compare methodologies and observe and record student progress to determine the efficacy of these teaching methodologies.
References


Han, Z., & Selinker, L. (2004, April). *Research into instruction and fossilization*. Discussion presentation at the annual convention of Teachers of English to Speakers of Other Languages, Long Beach, CA.