

TESOL 2007

Helping Students Recognize Pronunciation Strengths and Weaknesses

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Purpose of this session

- To describe two techniques for helping students focus attention on pronunciation strengths and weaknesses.
 - To describe research findings on usefulness of these techniques.
 - To discuss implications of these findings for teaching.
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Some background

- Learners often can't perceive errors or difficult target features in their own speech (Pennington, 1998).
 - Instruction is necessary to point out non-salient L2 features (Elliott, 1997), such as phrase stress and intonation.
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Research

- Some type of attention is needed for learning to occur (Schmidt, 1993).
 - Explicit L2 instruction is more effective than implicit (Norris & Ortega, 2001).
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This study: Two techniques for explicitly focusing learner attention

- Self-correction
 - Self-transcription
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Self-correction

Students...

- explicitly evaluate production
 - predict pronunciation with pronunciation rules
 - may review their production holistically
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What is a feedback control? The feedback control concept is very simple. It just takes the output signal and feeds it back into the input signal to maintain a certain value, and the input value is actually what we wanted to maintain. So later, after I show you the diagram of the computation, you can know exactly what this mechanism does. So the advantages of feedback control are: it has a disturbance rejection and guarantees the performance, and also you can stabilize an unstable system.

Self-transcription

Students...

- replay short segments of their recorded speech as many times as needed
 - explicitly listen for one target feature at a time
 - use multiple senses
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Click to listen to segment 1

So basically | ^{the} in presentation | I will give you | first give
you | the definition of the ASR, and give me give
some examples | how to test ASR and | finally |
hope we can | come up with some ideas | to cont
ASR. | But before that | I think it's better | to |
something | about the concrete. | So first I want to
you | who have any ideas about the concrete | wh
to components of concrete, | the applications of concrete

In-focus

- Students reported that they explicitly focused on these items
 - All students explicitly focused on primary phrase stress and message unit boundaries
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Out-of-focus

- Students did not report focusing on these items
 - Intonation was the most common out-of-focus target
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Research questions

- Does explicit focus lead to improved production?
 - Do students improve on out-of-focus (peripheral) targets?
 - Is one technique more effective than the other?
 - Do some target features improve more than others?
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My study

Repeated measures design:

- Each student tried out each technique

Pre- and post-test measures to determine amount of pronunciation improvement

- I compared their production accuracy **before** and **after** they used the techniques
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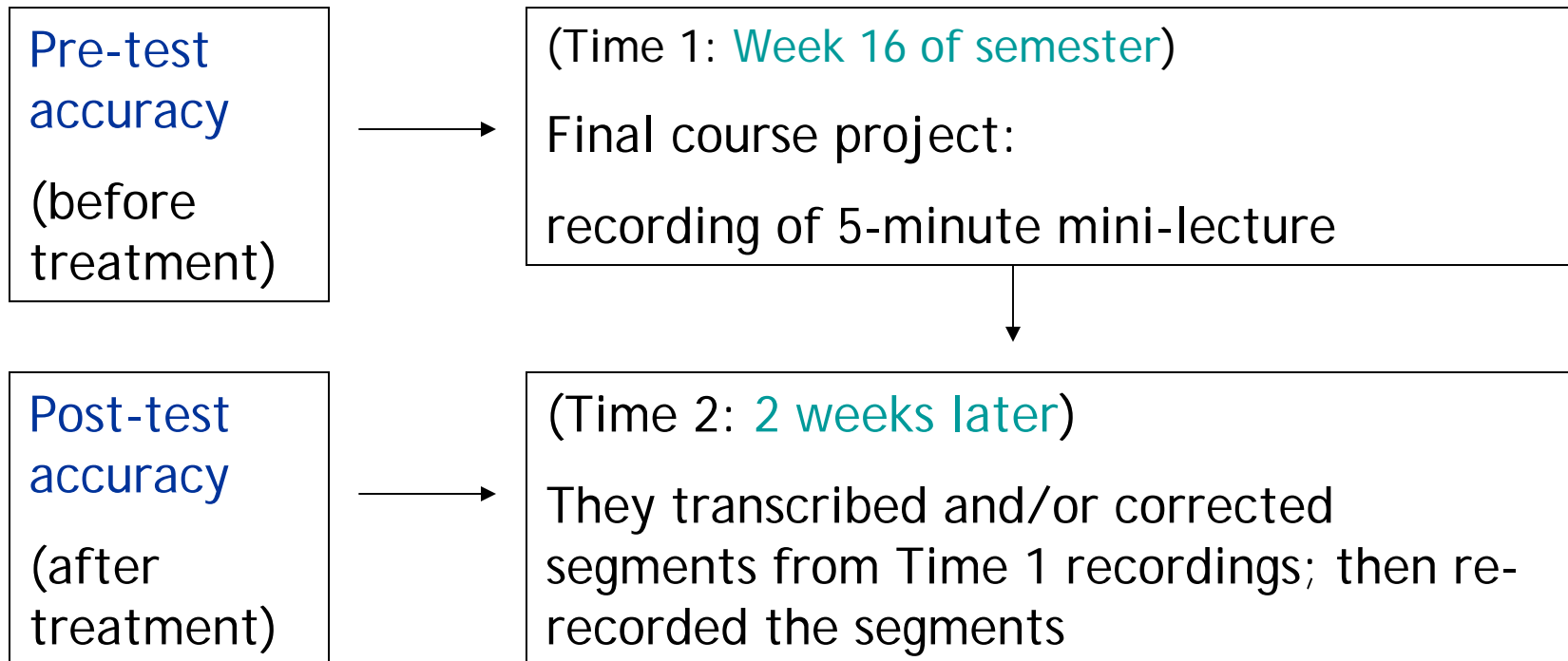
Participants

(Pronunciation course for ITAs)

Participant (L1: Mandarin)	Speak test score	M/F?	Age	Yrs of English instruction	Graduate student in:
High					
CY	45	F	28	17	Anthropology
QL	45	M	28	15	Geology
LL	45	M	29	15	Computer Eng.
Low					
HFC	35	F	23	10	Astronomy
ZS	37.5	M	26	10	Math
YX	42.5	M	28	10	Computer Eng.
Averages			27	12.8	

Study procedures

Explicit training on target pronunciation features and on self-transcription and self-correction during the semester



Treatment conditions

For segments 1, 4

T+C+
Self-transcribe
Mark corrections
Record

For segments 2, 5

T+C-
Self-transcribe
(Do not mark corrections)
Record

For segments 3, 6

T-C+
(T transcribed)
Mark corrections
Record

Controlled for order effects

Data analysis

- I transcribed pre-test segments
 - Coded total correct targets for PPS, message units, intonation
 - Calculated % correct and number of errors
 - I transcribed post-test segments
 - Calculated the number of pre-test errors corrected after the post-test and the % accurate after post-test
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HFC's recordings at T1 and T2

T1: but | it may become the | uh | it may become the definition of planets 

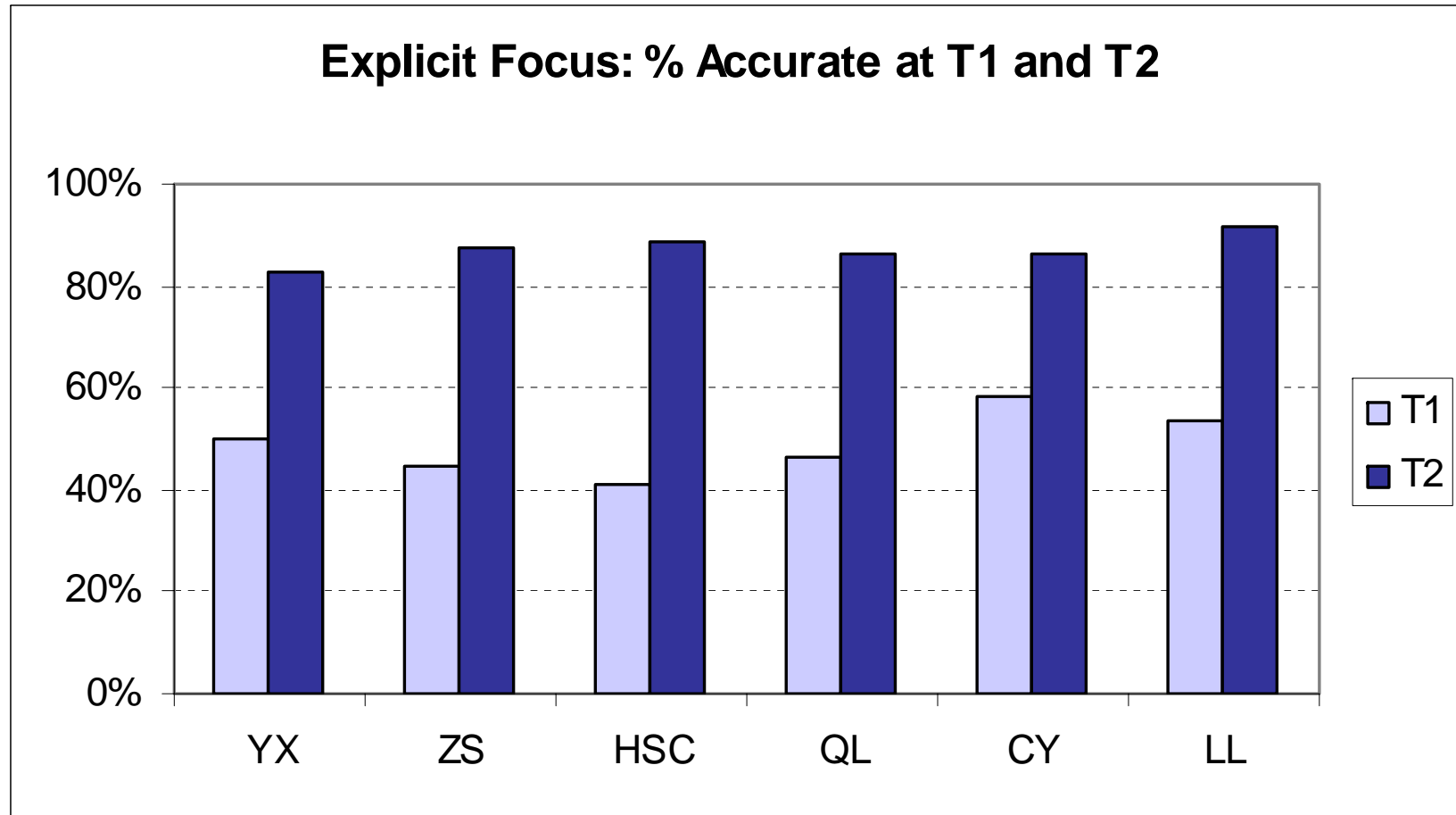
T2: but | it may be a problem of • the definition of planets 

Results...

Does explicit focus lead to improved production?

Group results	Individual results	Comment
Yes	Yes	This finding is highly consistent across all categories.

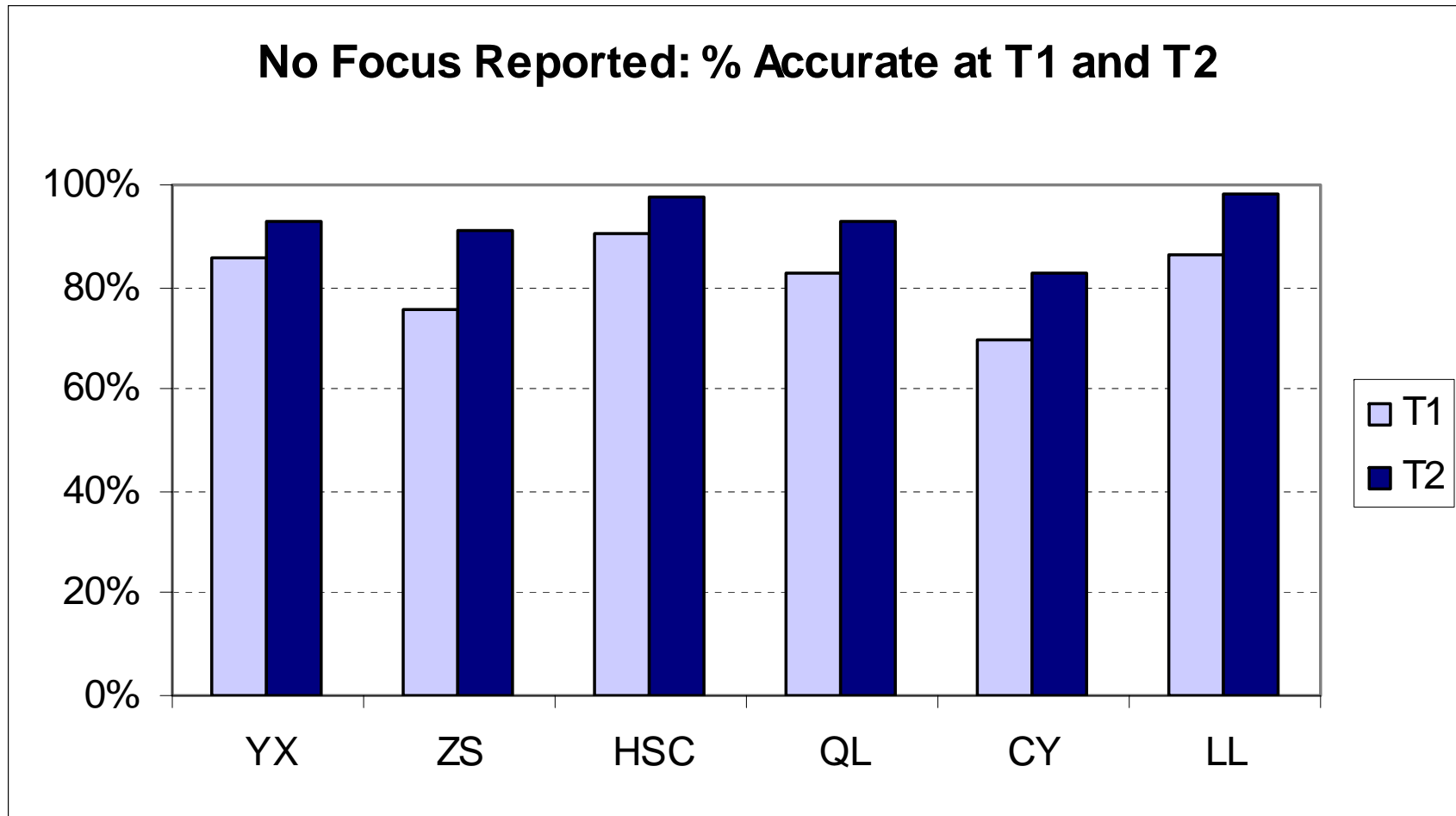
In-focus targets



Is there improvement on out-of-focus items?

Group results	Individual results	Comments
Yes	Yes	Not all attentional focus is explicit. Improvement occurs on items receiving “peripheral attention”

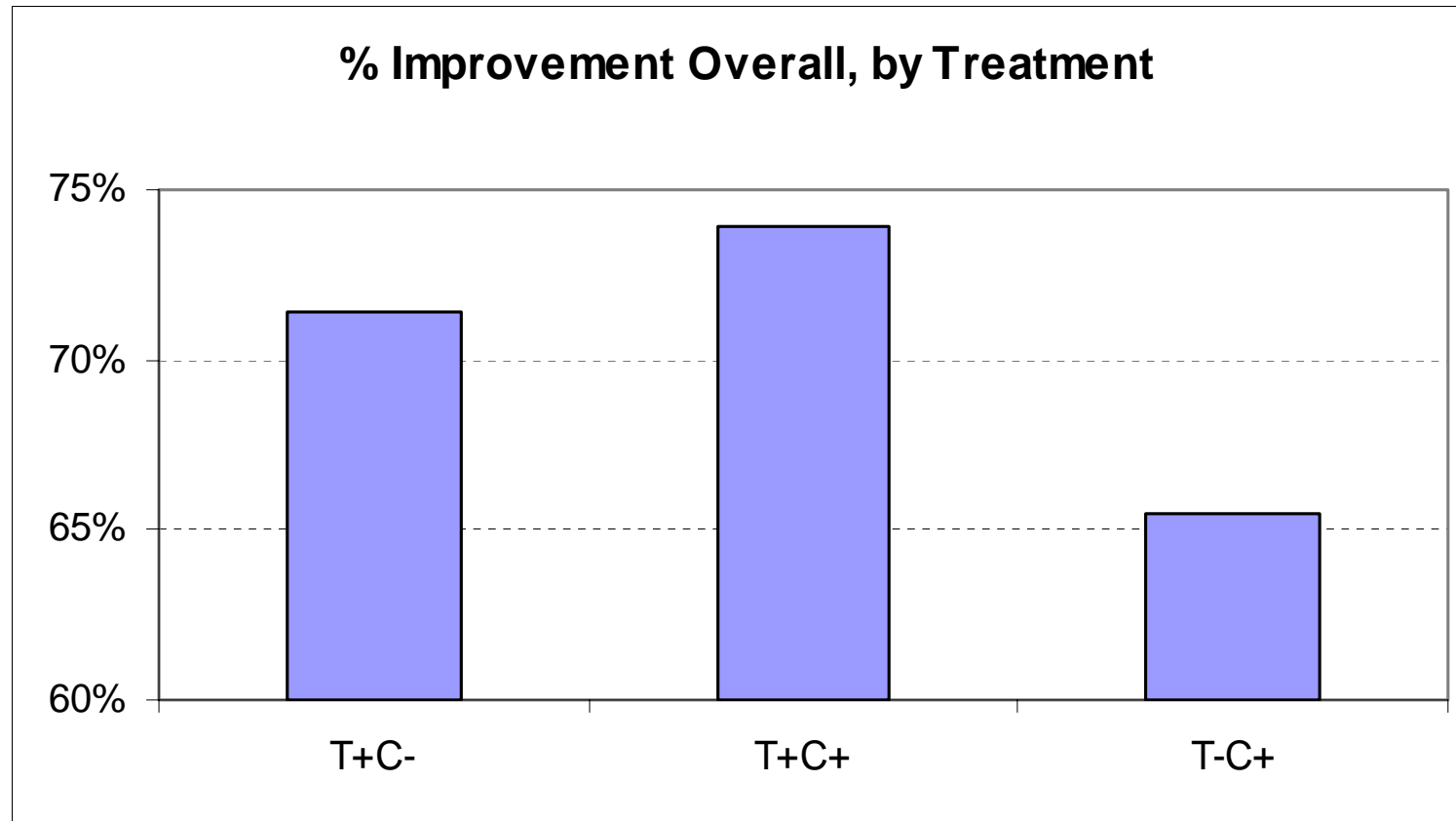
Out-of-focus items



Which treatment is most effective?

Group results	Comments
<p data-bbox="180 756 894 894">Self-transcription (T+) > no self-transcription (T-).</p> <p data-bbox="180 984 884 1114">No clear pattern for self- correction.</p>	<p data-bbox="1121 756 1692 821">Transcription helps.</p> <p data-bbox="1121 902 1885 1114">Interaction of C+/C- with T+/T- cannot be established from this data.</p>

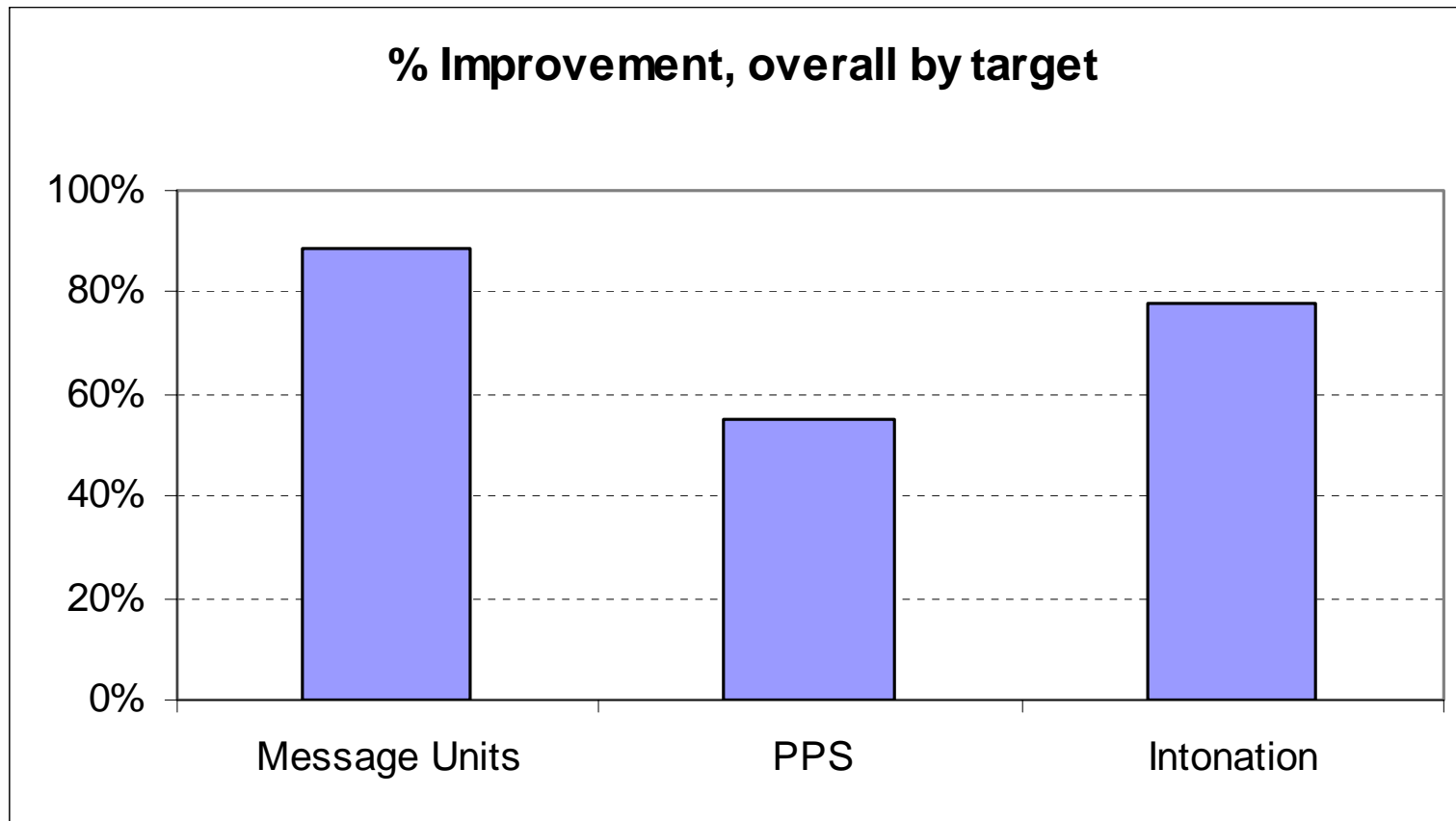
Treatment effects



Do some target features improve more than others?

Group results	MUs > Intonation > PPS
Individual results	MUs > Intonation > PPS
Comments	MUs are likely under conscious control and less prone to L1 influence.

Targets



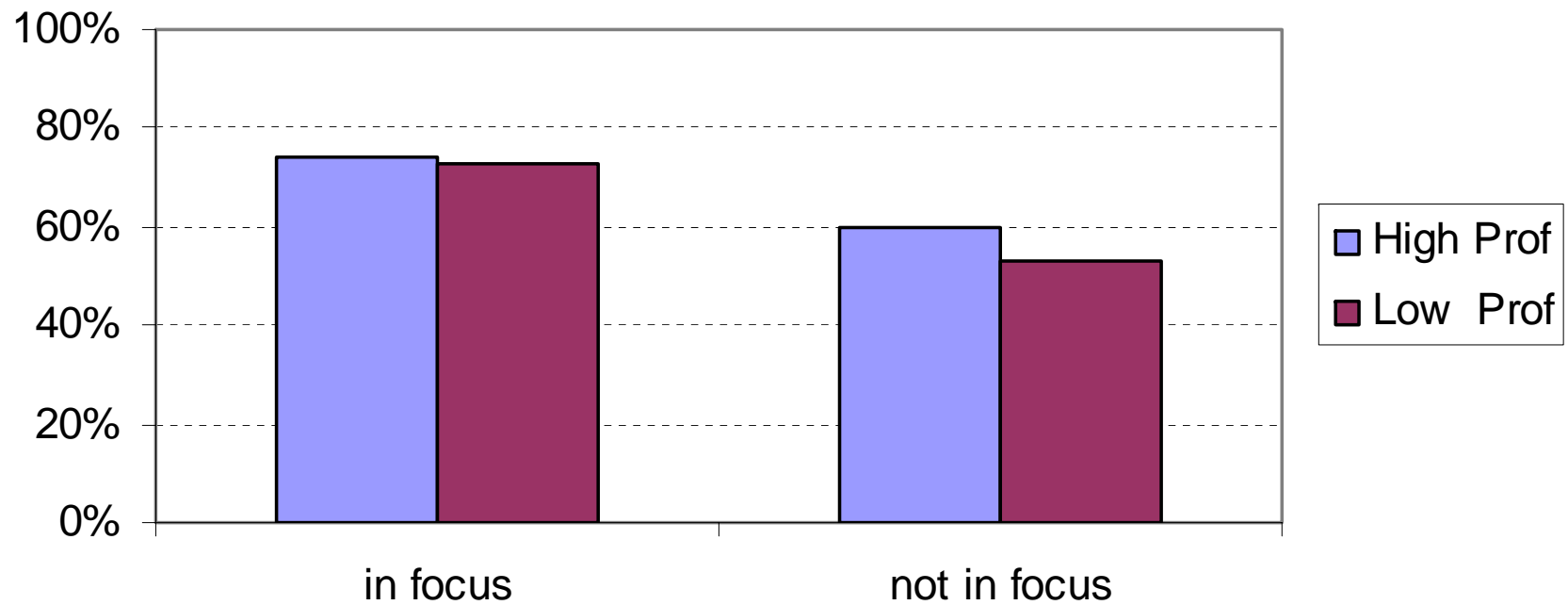
Are there differences based on proficiency level?

- No: on in-focus targets
- Yes: on out-of-focus targets
 - High-proficiency learners improved more on out-of-focus items than low-proficiency learners

Why?

- High-proficiency learners may have more attentional resources available to attend to peripheral items
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% Improvement from pre- to post-test; by focus and proficiency



Effect of treatment on targets, by proficiency level

High-proficiency learners:

- improved more using C+ on MUs and intonation
- but T+ was more effective for PPS

Low-proficiency learners:

- improved more using T+ for MUs and intonation
 - but C+ was more useful for PPS
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Why the differences?

For high proficiency learners...

- MUs are an indicator of fluency. Hi-prof learners likely are more fluent and may have more control over MUs to start with.
 - PPS is harder to control consciously; self-transcription may have helped them notice their errors.
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Why the differences?

For low-proficiency learners...

- May have fewer attentional resources available for monitoring accuracy of MUs and intonation.
 - Self-transcription may help them notice what they're doing.
 - May need to apply rules more consciously for use of PPS, because it is less automatized. Self-correction allows them to notice.
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**Do you have questions
before we start the
discussion?**

Discussion

How do these findings translate into teaching?
For example, what are implications for

- types of classroom activities and homework assignments;
- for different types of learners in different settings?

Are there other techniques you have used successfully for helping learners perceive their production?

Discussion Summary

Conclusions

- Focusing attention leads to improved production for both **in-** and **out-of-focus** targets.
 - Techniques such as self-transcription and self-correction can help learners notice their pronunciation errors.
 - A mix of these techniques can help learners with varied proficiencies.
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References

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Thank you!

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Slides and handouts are available on TESOL's website
