

THE ROLE OF COLLABORATION IN
DEVELOPING L2 VOCABULARY
KNOWLEDGE THROUGH COMPUTER-
ASSISTED LANGUAGEQUESTS

CALICO 2011

Sarah Huffman, Iowa State University

Overview of Presentation



Research question framed within review of relevant literature

Methodology & Task Design

Results

Discussion & Implications

Recommendations for future research

Collaboration promotes:

- growth of student interdependence (Bruffee, 1999)
- student responsibility (Totten, Sills, Digby & Russ, 1991)
- interpersonal skills (Rymes, 1997)
- cognitive and critical thinking skills (Johnson & Johnson, 1986)
- positive impacts on attitudes towards TL (Kohonen, 1992)

Why focus on vocabulary learning?



Vocabulary learning strategies have been:

-“central to language and of critical importance to the typical language learner” (Zimmerman, 1997, p.54)

-disregarded by those who deem syntax and morphology “more serious candidates for theorizing” (Richards, 1976, p. 77)

-undervalued by language teachers and researchers
“preoccupied with the development of grammatical competence” (Read, 2000, p. 1)

Few studies have focused explicitly on the effects of collaboration in second language vocabulary learning.

Research Question



How is learners' vocabulary knowledge of the selected items influenced by their participation in an individual learning environment or a collaborative learning environment?

RQ: How is learners' vocabulary knowledge of the selected items influenced by their participation in an individual learning environment or a collaborative learning environment?

Examining vocabulary knowledge development as opposed to acquisition:

-allows learners perceive their development along a continuum from less to more knowledge (Wesche & Paribakht, 1996)

- 1. I don't remember having seen this word before*
- 2. I have seen is word before but I don't know what it means*
- 3. I have seen is word before and I think it means....*
- 4. I know this word. It means...*
- 5. I can use this word in a sentence e.g....*

-treats vocabulary development as a process as opposed to product

RQ: How is learners' vocabulary knowledge of the selected items influenced by their participation in an individual learning environment or a collaborative learning environment?

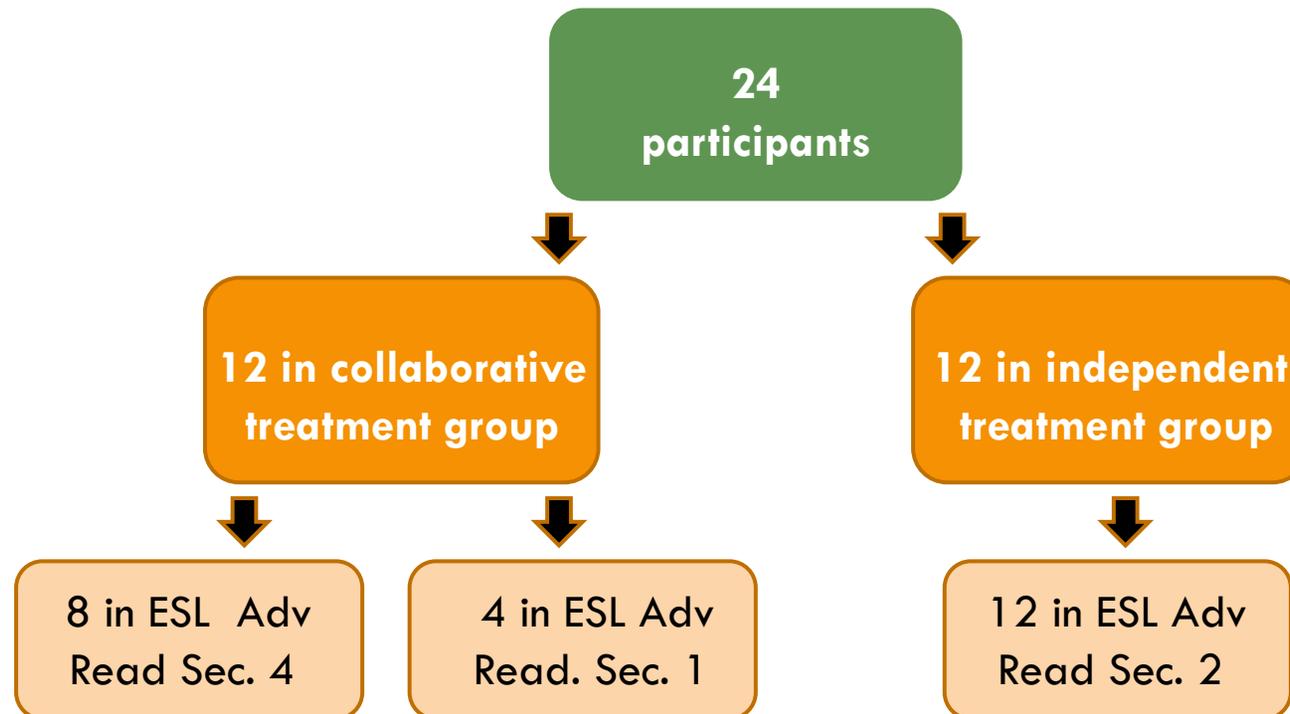
Collaboration in vocabulary learning may afford:

-significant improvements in learning outcomes (meeting or exceeding curricular objectives) (Sharan, 1980)

-development of less proficient students' individual learning and coping strategies (Kohonen, 1992)

-heightened familiarity with cultural contexts of and social practices in the TL (Mohan & Smith, 1992)

Methodology



Setting: participants' normal classroom for their ENGL 99R class during regularly scheduled times (for all sections this regular class was a computer lab)

Methodology



Week 1: Administration of Pre-Test Survey

Week 2: Task (LanguageQuest) Completion

Week 3: Administration of Post-Test Survey

Methodology

Pre-Test Survey collected data on participants':

- vocabulary knowledge of 75 vocabulary items selected from:
 - General Service List (West, 1953)
 - Academic Word List (Coxhead, 1998)
 - Longman Dictionary of Contemporary English list of the 3,000 most frequently spoken and written words(2007)
 - British National Corpus WordCount'stop 7,000 most frequently occurring words (2010)

- Vocabulary knowledge assessed using (Wesche & Paribakht's **Vocabulary Knowledge Scale** (VKS) (1996)
 1. *I don't remember having seen this word before*
 2. *I have seen is word before but I don't know what it means*
 3. *I have seen is word before and I think it means....*
 4. *I know this word. It means...*
 5. *I can use this word in a sentence e.g....*

Methodology



Task completion involved individual or collaborative participation in a computer-assisted LanguageQuest activity designed for the class.

The LanguageQuest had students explore etymology of target vocabulary by:

- choosing a vocabulary word from the list
- researching and reporting on word's meaning in English
- researching and reporting on word's etymology (NL derivation of word, word's meaning in NL, & any other relevant information about when or how the word was adopted into English)

The LanguageQuest also had students:

- compose a sentence using the word in context
- find a multimedia element (video or static visual image) that represents the language or culture from where each word derived

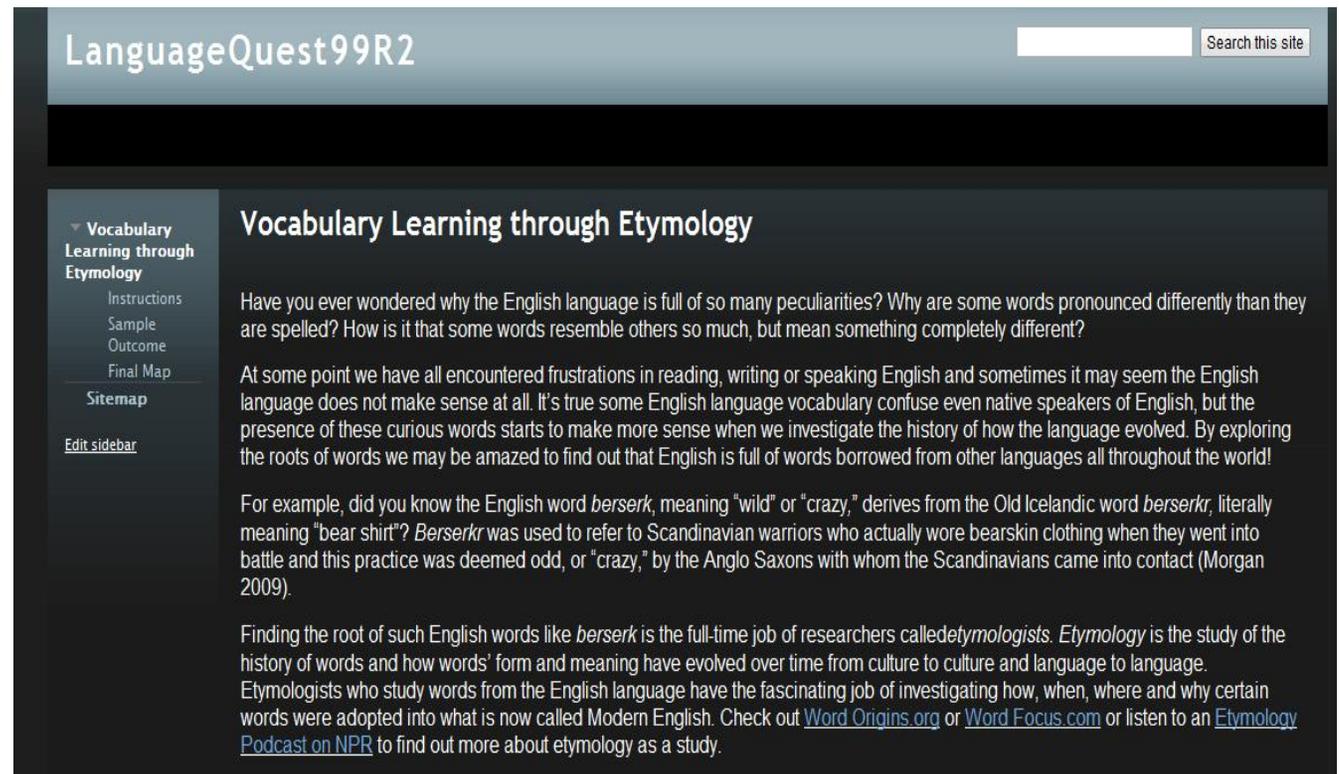
Students compiled all recorded information into a mark on a class Google map.

LanguageQuest Design

Students
were:

-introduced
to what
etymology is

-given oral
and written
instructions
for the
Language -
Quest task



LanguageQuest99R2 Search this site

▼ Vocabulary Learning through Etymology
Instructions
Sample
Outcome
Final Map
Sitemap
[Edit sidebar](#)

Vocabulary Learning through Etymology

Have you ever wondered why the English language is full of so many peculiarities? Why are some words pronounced differently than they are spelled? How is it that some words resemble others so much, but mean something completely different?

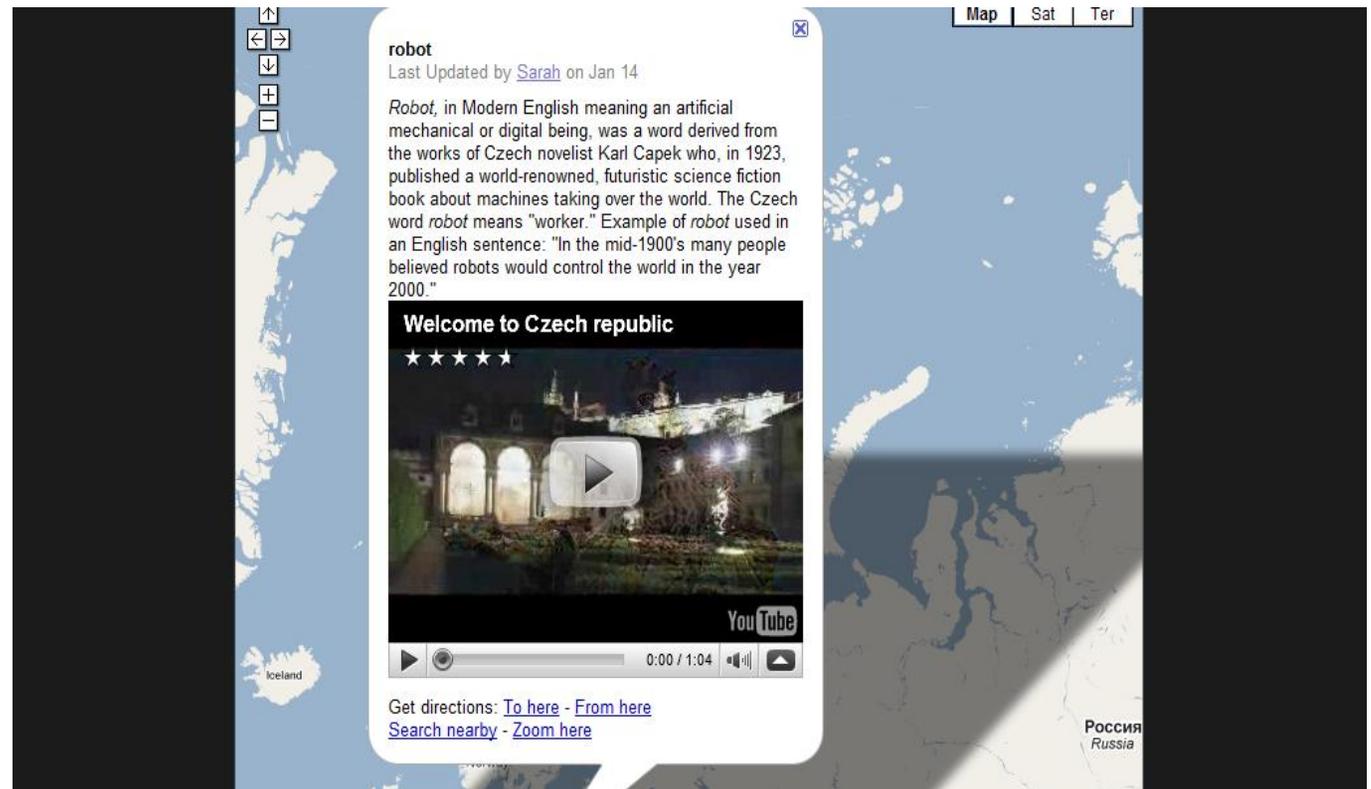
At some point we have all encountered frustrations in reading, writing or speaking English and sometimes it may seem the English language does not make sense at all. It's true some English language vocabulary confuse even native speakers of English, but the presence of these curious words starts to make more sense when we investigate the history of how the language evolved. By exploring the roots of words we may be amazed to find out that English is full of words borrowed from other languages all throughout the world!

For example, did you know the English word *berserk*, meaning "wild" or "crazy," derives from the Old Icelandic word *berserkr*, literally meaning "bear shirt"? *Berserkr* was used to refer to Scandinavian warriors who actually wore bearskin clothing when they went into battle and this practice was deemed odd, or "crazy," by the Anglo Saxons with whom the Scandinavians came into contact (Morgan 2009).

Finding the root of such English words like *berserk* is the full-time job of researchers called *etymologists*. *Etymology* is the study of the history of words and how words' form and meaning have evolved over time from culture to culture and language to language. Etymologists who study words from the English language have the fascinating job of investigating how, when, where and why certain words were adopted into what is now called Modern English. Check out [Word Origins.org](#) or [Word Focus.com](#) or listen to an [Etymology Podcast on NPR](#) to find out more about etymology as a study.

LanguageQuest Design

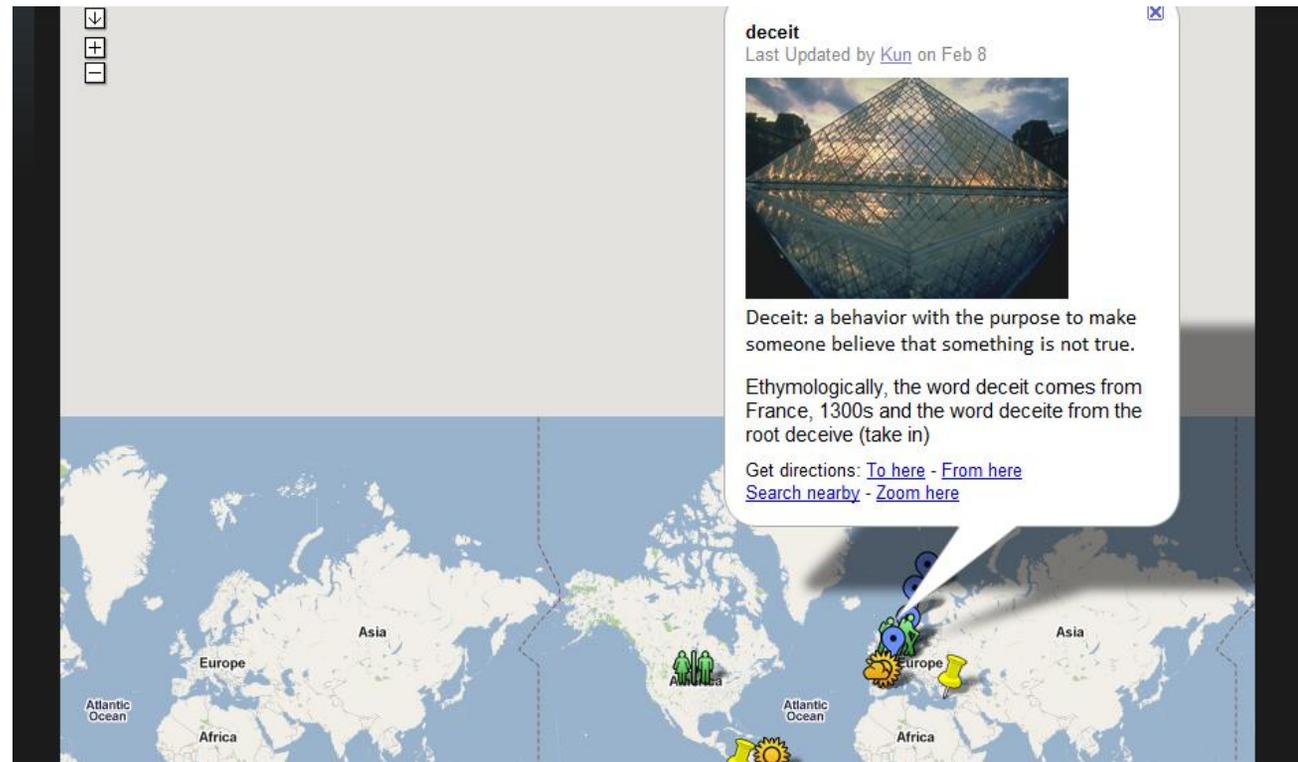
-shown an example of the outcome for the project



LanguageQuest Design

-gathered
information
about target
word

-added
mark to
class
Google
map



The screenshot displays a Google Map interface. A world map is visible with labels for 'Europe', 'Asia', and 'Africa'. A pop-up information box is overlaid on the map, pointing to a location in Europe. The pop-up contains the following text:

deceit
Last Updated by [Kun](#) on Feb 8



Deceit: a behavior with the purpose to make someone believe that something is not true.

Ethymologically, the word deceit comes from France, 1300s and the word deceive from the root deceive (take in)

Get directions: [To here](#) - [From here](#)
[Search nearby](#) - [Zoom here](#)

Methodology



Post-Test Survey collected data on participants’:

- vocabulary knowledge of the target vocabulary items they worked with in the LanguageQuest (using the VKS)

- preferences for learning styles and judgments about effectiveness of collaborative and individual learning styles (using open-ended response items)

Analysis



Research Question

*How is learners' vocabulary knowledge of the selected items influenced by their participation in an **individual** learning environment or a **collaborative** learning environment?*

Quantitative analysis of participants' responses on the VKS (Wesche & Paribakht, 1996) on Pre and Post-Test Surveys

Results

Quantitative Results of Analysis

Results of independent two-sample t-test assuming equal variances are

Statistic	Independent	Collaborative
Mean	0.583	1.352
SD	0.519	0.431
SEM	0.149	0.124
N	12	12
t	3.9473	
df	22	
SED	0.195	
P	0.0007	

Indicates the variant treatments had a significant effect on learners' reported growth in vocabulary knowledge.

Results (learner preferences)

Post-Test Survey questions about learning style preferences reveal

***15 of 21 learners (7 from independent group, 8 from collaborative) mentioned working with a partner is more beneficial than working alone.**

-More of the task can be accomplished with a partner

“It will be more efficient than working alone” (Collaborative Participant)

-Collaborators gain additional insight from their partners

“We can discuss some questions and he will tell me something which I don’t know” (Independent Participant)

***2 of the 21 noted preferences for working alone, because:**

“I don’t like work with a partner. I like thinking by myself” (Independent Participant)

“I can do the job myself” (Collaborative Participant)

Interpretation of Results

RQ: How is learners' vocabulary knowledge of the selected items influenced by their participation in an individual learning environment or a collaborative learning environment?

Quantitative data reveal:

- both treatment groups reported an increase vocabulary knowledge
- collaborative treatment group reported significantly greater amount of growth in vocabulary knowledge

The treatment group in which the learners participated significantly affected their reported growth in vocabulary knowledge.

Interpretation of Results



What accounts for greater amount of vocabulary knowledge growth in collaborative learners?

-negotiation and decision-making in collaborative groups provided intensified engagement with the content, possibly aiding retention

-motivation to know the word for self and for partner, as there is a push to “take initiative in learning the subject together” (Fang & Warschauer, 2004, p. 312)

-creation of emotions, ideas or “shared meanings” connected to target vocabulary (Downes, 2009)

-exchange of information, knowledge and expertise among collaborators is “mediated by personal relationships, preferences and motivations” (Debski et al., 2005, p.121)

Implications



Second language learning instructors could:

- select an appropriate learning style that yields increased development of vocabulary knowledge
- consider incorporating cooperative learning activities into their vocabulary instruction to provide greater engagement with the language
- integrate resources learners could continue to use outside the classroom in real-life communicative contexts (Brinton, 2001)

Limitations



- low number of participants in treatment groups and collaborative group divided into two groups
- lack of diversity among participants
- task too complex or overly challenging for learners
- lack of authenticity of LanguageQuest task
- complications in VKS measurement tool of vocabulary knowledge (Wesche&Paribakht, 1996)

Recommendations for Future Research



Examining the impact of the collaborative learning style on vocabulary acquisition, because

“Cooperative learning provides a viable, and in many contexts, a more effective alternative to the competitive ethic which dominates much educational thinking today” (Nunan, 1992, p. 10).

Research on incorporating interactive, computer-assisted vocabulary learning activities, because

“the computer screen can be seen as a microcosm inviting interaction and extending the arena of the classroom, limited by the physical state of objects it contains” (Debski, Jeon-Ellis and Wigglesworth, 2005, p. 141)

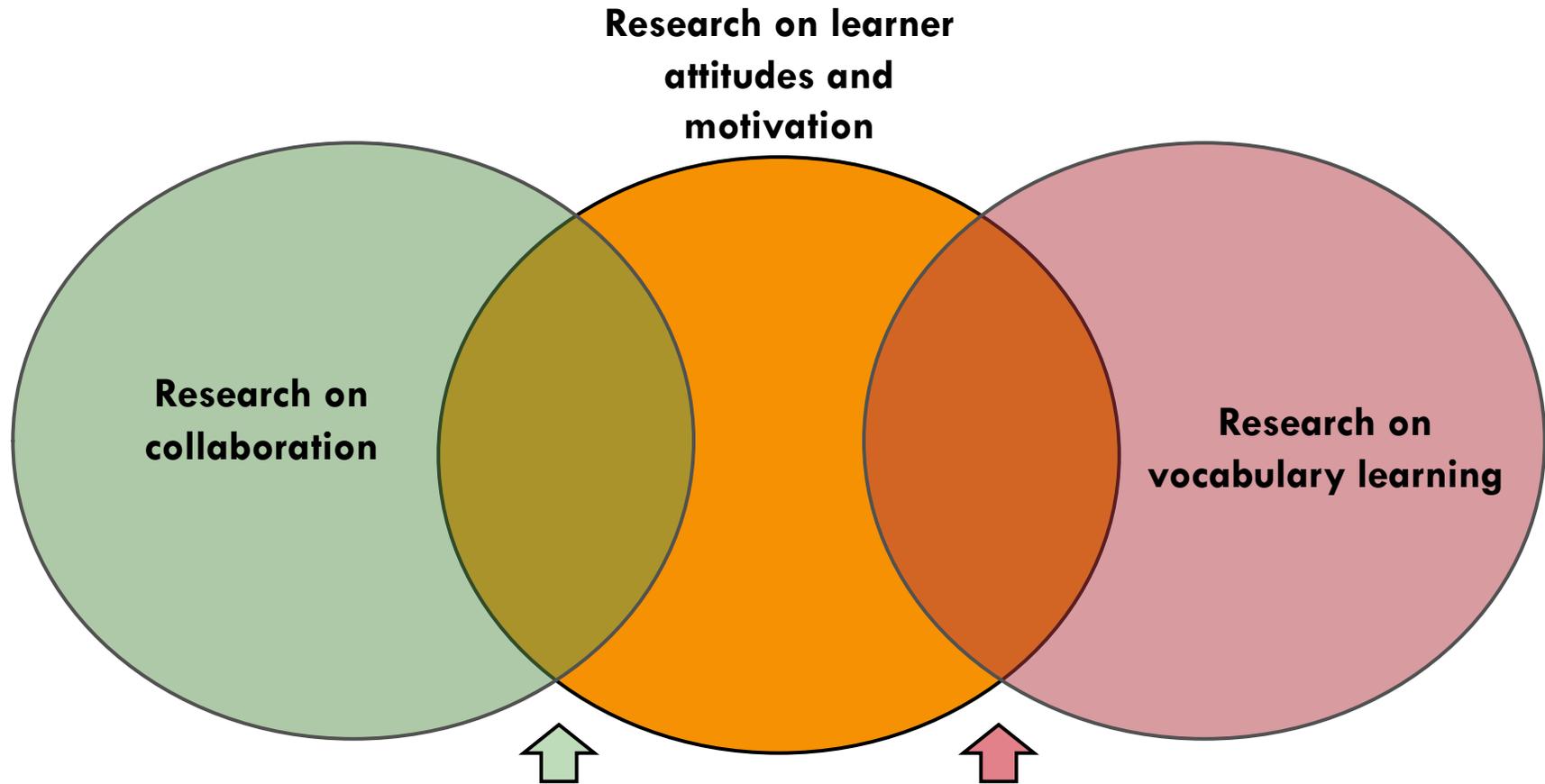
Longitudinal case studies investigating the impact of various learning styles on vocabulary acquisition and learner attitudes and motivation in vocabulary learning, because

the case study is “a valuable means of illustrating issues connected with learning, using, and in some cases, losing another language” (Duff, 2007, p. 1), and provides investigation of contextual variables.

Questions? Comments?

Email: shuffman@iastate.edu

Exposing the gap in second language learning research



Johnson & Johnson, 1975;
Brown & Palincsar, 1989;
Kohonen, 1992; Dodge, 2002

Nation, 1983; 1990;
1997; 2001; 2007;
2008

Results



Notable trends in open-ended responses:

Pre-Test Survey responses tended to categorize vocabulary as a prerequisite for academic success.

“It helps in my future classes of studies” (Collaborative Participant, Pre-Test)

Post-Test Survey responses tended to center on need for vocabulary in communication.

“I need [vocabulary] to communicate with others” (Independent Participant, Post-Test)

Both treatment groups’ participants acknowledged importance of vocabulary in building other proficiency skills in English.

“ It can help me to understand what others said” (Independent Participant, Post-Test)

“I would like to know some vocabulary for improving my writing”
(Collaborative Participant, Pre-Test)

Interpretation of Results



What accounts for the preferences for collaborative learning?

-desire for interaction. Work with a partner “trigger[s] interaction and meaningful communication in the L2” (Koenraad, 2006, p.2)

-the collaborative relationship allows for partners to assist one another

- chance for sharing and discussion, promoting creativity among partners (Dodge, 2002)

-efficiency of time and energy in the learning process, because there is shared responsibility and interdependence among group members (Fang & Warschauer, 2004)