

Identifying Word Definitions:  
ESL Students' Uses and Perceptions of Online Resources

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### Abstract

The current study aimed at gathering information on the online resources English as a second language (ESL) students employ when searching for word definitions, the strategies they use, and the perceptions they have of these resources and the strategies they use. The participants were all ESL students in the Program in Intensive English (PIE) at Northern Arizona University (NAU). Data was collected using a Sequential Mixed Methods design approach (Teddlé & Tashakkori, 2006). Information on the online resources and strategies students use, as well as their perceptions, were gathered using think-alouds and interviews. The findings from the think-alouds and interviews informed the design of a questionnaire, which aimed at gathering similar information from a larger group. The results found that many students rely on the online resources YouDao, dictionary.com, and the definitions provided by Google. Unlike previous research on paper dictionaries (e.g. Neubach and Cohen, 1988; Tono, 1984; Wingate, 2004), the findings from the current study found that students actively look for other information to help them understand the meaning of unknown words. The findings also found that students perceive these resources and strategies as useful. The results of the study have implications for which resources English language instructors should focus on when teaching vocabulary learning strategies.

## Identifying Word Definitions:

### ESL Students' Uses and Perceptions of Online Resources

#### **Background**

The current study investigated the online resources ESL students use when finding word definitions, the strategies they use, and the perceptions they have towards these resources and strategies. The main motivation for the study was the author's experiences as an English as a second language (ESL) teaching assistant in the Program in Intensive English (PIE). The PIE courses include instruction on how to use the paper dictionaries provided by the program. During the author's time as a teaching assistant, he noticed that the students were not using these resources. Instead, students relied on their phones to search for definitions. The author calls the resources students use on their phones "online resources" since students access these resources via the internet. Students also use a variety of applications (or apps) they can download. Even though these apps may not require internet service, the author still includes them under the umbrella term "online resources." Thus far, no research has investigated these issues. The current study aimed to address these gaps in the literature.

#### **Strategies for Finding Word Definitions**

Wingate (2004) found that learners inappropriately applied dictionary use strategies when identifying the meaning of unknown words. Learners tended to rely on the first definition of the dictionary entry and ignore other important information. This strategy, relying on the first piece of information learners identify, is echoed in other empirical studies. Tono (1984) found that even experienced language learners (i.e., advanced language learners) tended to choose the first translation equivalent in bilingual dictionaries and ignored other cues, such as the part of speech,

that may have aided them in identifying a more appropriate translated word. Neubach and Cohen (1988) also found that learners relied on the first entry they found in a dictionary, without looking for further information that would have better informed their choices. The current study aimed to address this issue when students use online resources. Do students rely on the first definition or piece of information they find and stop? Or do they actively look for other information they think will aid them in understanding the unknown word?

### **Perceptions of the Resources and Strategies Used to Find Word Definitions**

Wingate (2004) also found that students perceived monolingual English dictionaries as being difficult to use because they are “hard work” and were thus less likely to use them (p. 10). Fan (2003) found that learners not only use dictionaries to find the contextualized meaning of a new word frequently, but also found that students perceive this strategy to be very useful. Fan (2003) also found that students often use dictionaries to find the grammatical pattern of a certain word and that students’ also found this strategy to be highly useful. Echoing these findings, Griffiths (2007) found that student use of dictionaries as a language learning tool rated high in terms of usefulness, based on the results of a questionnaire. And similar to the findings from Wingate (2004), Kent (2001) found that students liked using dictionaries because of the content and ease. The current study aimed to investigate these issues further as they relate to online resources. How useful do students perceive online resources? And how useful do students’ perceive the strategies they use when using these online resources?

### **Research Questions**

RQ1: What online resources do ESL students employ to find word definitions?

RQ2: What strategies do ESL students employ when using online resources to find word definitions?

RQ3: What perceptions do ESL students have of the online resources and strategies they employ?

RQ4: To what extent are there differences among students of different L1 backgrounds?

## **Methods**

### **Participants**

All participants in the current study were ESL students enrolled in the PIE at Northern Arizona University (NAU). All of the participants were college aged students; aged 18 years and older. A profile of the participants is given below in Table 1.

Table 1

#### *A Profile of the Participants in the Current Study*

Data Collection Task	Number of Participants	L1 Breakdown
Think-Aloud Sessions	n = 6	Chinese (n = 3); Arabic (n = 2) Portuguese (n = 1)
Interview Sessions	n = 7	Chinese (n = 4); Arabic (n = 3)
Questionnaire	n = 19	Chinese (n = 12); Arabic (n = 5) Korean (n = 1); Portuguese (n = 1)

NB: When answering RQ4, the author only considered L1 Chinese and L1 Arabic participants.

### **Procedures**

The current study used a Sequential Mixed Methods design approach. Thus, this study used both qualitative (think-alouds and interviews) and quantitative (questionnaire) research methods. The findings from the qualitative data were used to formulate the questions used to gather the quantitative data (Teddlie & Tashakkori, 2006). The think-alouds presented

participants an unknown word they had to look up using the online resource of their choice and to explicitly describe the steps they take to do so. This enabled the gathering of information on the strategies students use. In the interviews, participants were asked which online resources they prefer to use, their perceptions of these resources, and the strategies they use. The findings from the qualitative phase of the Sequential Mixed Methods design were used to create a questionnaire that was disseminated to a larger number of participants. The questionnaire is provided in Appendix A.

## Results

### *RQ1 and RQ4*

The results for RQ1 (What online resources do ESL students employ to find word definitions? ) and RQ4 (To what extent are there differences among students of different L1 backgrounds? ) are given below in Table 2.

Table 2

### *First and Second Choice of Online Resource*

Participants	First Online Resource Choice		Second Online Resource Choice	
Overall	YouDao	37%	Google Definition	28%
	Google Definition	32%	Dictionary.com/YouDao	22%
L1 Arabic	Dictionary.com	60%	Dictionary.com	50%
	Google Definition	40%	Google Definition/ a link from a Google search	25%
L1 Chinese	YouDao	58%	YouDao	33%
	Google Definition	33%	Google Definition/ a link from a Google search	17%

In the First and Second Online Resource Choice columns, the top two responses are given, along with the percentage of participants who chose each resource.

As Table 2 shows, overall 37% of participants chose YouDao as their first choice, while 32% of participants chose the definition provided by Google as their first choice. Among L1 Arabic participants, 60% chose dictionary.com as their first choice, while 58% of L1 Chinese participants chose YouDao as their first choice.

#### *RQ2 and RQ 4*

The results for RQ2 (What strategies do ESL students employ when using online resources to find word definitions?) and RQ4(To what extent are there differences among students of different L1 backgrounds? ) are given below in Table 3.

Table 3

#### *What Participants Look at When They Search for a Word Definition*

Participants	What do you look at first?		Second?		Third?	
Overall	Definition	47%	Definition	56%	Definition/ Synonyms/ Translation	28%
	Translation	26%	Example Sentences	22%		
L1 Arabic	Definition	40%	Definition	60%	Definition/ Translation	40%
	Translation/ Part of Speech/ Example Sentences	20%	Part of Speech/ Example Sentences	20%		
L1 Chinese	Definition	58%	Definition	50%	Synonyms	42%
	Translation	33%	Example Sentences	25%	Definition	25%

Table 3 explains which pieces of information participants rely on when trying to understand word definitions. The column “What do you look at first” presents the findings on which piece of information participants look at first when searching for a certain word. The “Second?” and “Third?” columns presents the findings on which piece of information participants look at second and third, respectively.

As Table 3 shows, overall 47% of participants look at the definition first, while 26% of participants look at an L1 translation first as a language learning strategy. It is important to note that the questionnaire included the option ‘I do not look for additional information’. None of the participants chose this option. This means that all participants look for other information after finding the first piece of information in their search. Among L1 Arabic participants, 40% look at the definition first, while 58% of L1 Chinese students do the same. Something not presented in Table 3 is the finding that, of the participants who chose ‘definition’ as the first thing they look at, 33% said they then look at the example sentences, while 22% said they look at the part of speech next.

#### *RQ3 and RQ4*

The results for RQ 3 (What perceptions do ESL students have of the online resources and strategies they employ?) and RQ4 (To what extent are there differences among students of different L1 backgrounds? ) are given below. Table 4 gives the top two first and second choices of online resources and the perceived usefulness of each. The questionnaire used a Likert scale to gather this data. The top two responses and the percentage of participants responding as such are given in the “Perceived Usefulness” column.



Table 4

*Usefulness of Specific Online Resources*

Choice Rank	Online Resource	Perceived Usefulness	
First Choice	YouDao	Very Useful	57%
		Useful	43%
	Google Definition	Useful	83%
		Very useful	17%

As Table 4 shows, 57% of the participants who chose YouDao as their first choice find it “very useful,” while 83% of the participants who chose the definitions provided by Google as their first choice find it “useful.”

Table 5 shows how useful participants think specific pieces of information are to consider as a language learning strategy, specified in the “Information” column. A Likert scale was used to gather this information. The majority of the participants, regardless of L1 background, “strongly agree” that the definition is helpful as a language learning strategy. A majority of participants also “strongly agree” that the example sentences and L1 translation are helpful. It is interesting to note that among L1 Chinese participants, 42% only “slightly agree” that the part of speech is helpful.

Table 5

*Perceived Usefulness of Specific Information Found within the Online Resources*

Participants	Information	Perceived Usefulness	
Overall	Definition	Strongly agree	78%
L1 Arabic	Definition	Strongly agree	60%
L1 Chinese	Definition	Strongly agree	83%
Overall	Part of Speech	Strongly agree	44%
L1 Arabic	Part of Speech	Strongly agree	60%
L1 Chinese	Part of Speech	Slightly agree	42%
Overall	Example Sentences	Strongly agree	67%
L1 Arabic	Example Sentences	Strongly agree	60%
L1 Chinese	Example Sentences	Strongly agree	67%
Overall	Synonyms	Agree	50%
L1 Arabic	Synonyms	Agree	60%
L1 Chinese	Synonyms	Strongly agree/agree	42%
Overall	L1 Translation	Strongly agree	72%
L1 Arabic	L1 Translation	Agree	60%
L1 Chinese	L1 Translation	Strongly agree	83%

**Relevance to the PIE and Second Language Learning**

As previously mentioned, all of the participants in the current study were students at the PIE. Thus, the findings from this study are relevant to the PIE. The PIE courses include instruction on how to use the paper dictionaries provided by the program. However, students do

not use them, instead they rely on the online resources on their phones. Overall, students use YouDao, dictionary.com, and the definitions provided by Google the most often. Concerning strategies, unlike previous research (e.g. Neubach & Cohen, 1988; Tono, 1984; Wingate, 2004), students actively search for more information, vs. stopping at first definition or entry they find, as a language learning strategy. The findings also show that students think these resources and strategies are useful. Knowing this, the curriculum concerning dictionary use strategies at the PIE should be modified to include these pervasive online resources.

The findings from the current study are also relevant to second language learning. This study uncovered a new area of second language learning (i.e., the online resources students use) which has not been investigated in the past. Because students are increasingly relying on their phones to gather information, it is important to know which resources and apps they are using and how they are using them. This can better inform second language learning, as materials become even more technological driven.

## References

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**Appendix A – Qualtrics Questionnaire (Exported from Qualtrics)****Identifying vocabulary word definitions: ESL students' uses and perceptions of online resources**

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**Start of Block: Default Question Block**

You are being invited to participate in a research study titled **“Identifying vocabulary word definitions: ESL students’ uses and perceptions of online resources”**. This study is being done by Garrett Larson from Northern Arizona University.

The purpose of this research study is find out what strategies ESL students employ when using online resources to find the meaning of an unknown word. It will also find out their perceptions of these resources and strategies.

If you agree to take part in this study, you will be asked to complete an online questionnaire.

This questionnaire will ask about the online resources you use, how you use them, and how useful you think they are. It will take you approximately 5 minutes to complete.

You may not directly benefit from this research; however, we hope that your participation in the study may better inform teachers on how to teach online resource use strategies in the classroom.

We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach of confidentiality is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by keeping all information on a secure computer at NAU.

Your participation in this study is completely voluntary and you can withdraw at any time. You are free to skip any question that you choose. If you choose not to participate it not affect your relationship with Northern Arizona University or result in any other penalty or less of benefits to which you are otherwise entitled.

If you have questions about this project or if you have a research-related problem, you may contact the researcher, Garrett Larson at [gl349@nau.edu](mailto:gl349@nau.edu). If you have any questions concerning your rights as a research subject, you may contact Northern Arizona University IRB Office at [irb@nau.edu](mailto:irb@nau.edu) or (928) 523-9551.

By submitting this survey, I affirm that I am over 18 years of age and agree that the information may be used in the research project described above.

Click Next to begin.

The following questions will ask about your background.

Click Next to begin.



Page Break



Q1 What is your first language?

- Arabic
  - Chinese
  - Japanese
  - Korean
  - Portuguese
  - If other, please specify: \_\_\_\_\_
- 

Q2 What is your home country?

- Brazil
  - China
  - Japan
  - Kuwait
  - Saudi Arabia
  - South Korea
  - If other, please specify: \_\_\_\_\_
-

Q3 What is your current level at the intensive English language program where you study?

- 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - Beginning
  - Intermediate
  - Advanced
  - If other, please specify: \_\_\_\_\_
- 

Q4 What is your age range?

- 18-25
  - 26-35
  - 36-45
  - 46 +
-



Q5 What is your gender?

Female

Male

If other, please specify: \_\_\_\_\_

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Q6 Do you have regular access to the internet?

Yes

No

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Page Break

\_\_\_\_\_

Choose a word below that you do not know:

- abandonment
- entrenched
- reverie
- wearable
- yoctosecond

Use your phone to look up the meaning of the word. Think about each step you take to understand the word. Do you use Google, YouDao, or something else? Do you look for the part of speech, definition, example sentences, or something else?

The following questions will ask about the online resources you use.

Click Next to begin.

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Page Break

Q7 What is your **first choice** when choosing an online resource to look up vocabulary word definitions?

- Definition from a Google search
- A link from a Google search
- YouDao
- Dictionary.com
- Merriam-Webster dictionary app
- If you use another source, please specify:

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Q8 Why is this your first choice?

- Please provide at least one reason:

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Q9 How useful do you think this resource is?

- Very useful
- Useful
- Slightly useful
- Not useful

---

Q10 How did you find this resource?

- Teacher
- Friend(s)
- Google search
- If other, please specify: \_\_\_\_\_

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Page Break \_\_\_\_\_

Q11 What is your **second choice** when choosing an online resource to look up vocabulary word definitions?

- Definition from a Google search
  - A link from a Google search
  - YouDao
  - Dictionary.com
  - Merriam-Webster dictionary app
  - If you use another source, please specify:  
\_\_\_\_\_
  - My first choice is the ONLY resource I use
- 

Q12 Why is this your second choice?

- Please provide at least one reason:  
\_\_\_\_\_
- 

Q13 How useful do you think this resource is?

- Very useful
  - Useful
  - Slightly useful
  - Not useful
-

Q14 How did you find this resource?

- Teacher
- Friend(s)
- Google search
- If other, please specify: \_\_\_\_\_

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Page Break

Q15 When you try to understand a new vocabulary word, what do you look for **first**?

- Part of speech (verb, noun, adjective, adverb, etc.)
  - Definition
  - Example sentences
  - Synonyms
  - Translation
  - If you look for other information, please specify:  
\_\_\_\_\_
- 

Q16 Why do you look for this information first?

- Please provide at least one reason:  
\_\_\_\_\_
-

Q17 When you try to understand a new vocabulary word, what do you look for **second**?

Part of speech (verb, noun, adjective, adverb, etc.)

Definition

Example sentences

Synonyms

Translation

If you look for other information, please specify:

---

I do not look for additional information

---

Q18 Why do you look for this information second?

Please provide at least one reason:

---



Q19 When you try to understand a new vocabulary word, what do you look for **third**?

Part of speech (verb, noun, adjective, adverb, etc.)

Definition

Example sentences

Synonyms

Translation

If you look for other information, please specify:

---

I do not look for additional information

---

Q20 Why do you look for this information third?

Please provide at least one reason:

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Page Break

Q21 Mark how much you agree or disagree with the following statement.

I think that the **part of speech** is helpful when trying to understand the meaning of a vocabulary word.

- Strongly agree
  - Agree
  - Slightly agree
  - Slightly disagree
  - Disagree
  - Strongly disagree
- 

Q22 Mark how much you agree or disagree with the following statement.

I think that the **definition** is helpful when trying to understand the meaning of a vocabulary word.

- Strongly agree
  - Agree
  - Slightly agree
  - Slightly disagree
  - Disagree
  - Strongly disagree
-

Q23 Mark how much you agree or disagree with the following statement.

I think that **example sentences** are helpful when trying to understand the meaning of a vocabulary word.

- Strongly agree
  - Agree
  - Slightly agree
  - Slightly disagree
  - Disagree
  - Strongly disagree
- 

Q24 Mark how much you agree or disagree with the following statement.

I think that **synonyms** are helpful when trying to understand the meaning of a vocabulary word.

- Strongly agree
  - Agree
  - Slightly agree
  - Slightly disagree
  - Disagree
  - Strongly disagree
-

Q25 Mark how much you agree or disagree with the following statement.

I think that **translating a word to my first language** is helpful when trying to understand the meaning of a vocabulary word.

- Strongly agree
- Agree
- Slightly agree
- Slightly disagree
- Disagree
- Strongly disagree

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Page Break

Q26 What do you do if you **cannot** find the correct meaning when using an online resource?

- Ask a teacher
- Ask a friend
- Ask a family member
- Search on Google
- Search on YouDao
- If other, please specify: \_\_\_\_\_

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Page Break

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Thank you for taking the survey!

Click Next to complete the survey.

**End of Block: Default Question Block**

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