



**UNIVERSIDAD DE QUINTANA ROO**

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**División de Ciencias Políticas y Humanidades**

**English-Spanish translation of the chapter**

**“LEXICAL ACQUISITION IN THE EARLY SCHOOL YEARS”**

**MONOGRAFIA**

**Para obtener el grado de:**

**LICENCIADO EN LENGUA INGLESA**

**Presenta**

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## I.- INTRODUCCION

The purpose of a translation is to understand in your mother language what a text in another language tries to say when you read it. Translation enables people to understand the ideas in a text even if they do not speak the writer's language. A translation could be the mediator of what it is being said because there are many languages in the world which are not mutually intelligible. In this case, as I consider that English is one the most important language in the world and it is spoken in many countries, translation into and from English plays an important role in international communication.

In addition, the purpose of this translation is to have a useful tool for the readers, especially for those in humanities major in the *Universidad de Quintana Roo*, who are the ones that will be interested in the topic because of the subject they have.

Newmark (1991, 1) indicates that translation is concerned with moral and factual truth. This truth can be effectively rendered only if it is grasped by the reader and that is the purpose and the end of translation.

Bernacka (2012, 110) says:

Translation is not merely an interlinguistic process. It is more complex than replacing source language text with target language text and includes cultural and educational nuances that can shape the opinions and attitudes of recipient.

To translate a text might not be an easy task, but when you translate something relevant that could help others, it has to be very clear because what you transmit has to be understandable for those persons who are going to read it; therefore, it is of great importance to convey the same idea of the original text among other aspects.

## 1.1. Text and Topic

This monograph is a translation from English into Spanish of the chapter *Lexical acquisition in the early school years* from the book *Language Development across Childhood and Adolescence* written and published in 2004 by Liliana Tolchinsky. This text is about the need and the process of a child to acquire a language in early school so that he or she could communicate with others.

It is well known that children acquire their language so rapidly, but how so? Perhaps because they are always in touch with the language, that is, their family may always speak with their children, so they can hear many words every day which makes them to be in contact with their language. That is a great advantage because children increase their vocabulary.

As stated by O'Grady (2005, 2), "from a parent's point of view, the most important and exciting thing about language acquisition is probably just that it allows their children to talk to them."

In addition, Foppoli (2015) argues that:

Children acquire their mother tongue through interaction with their parents and the environment that surrounds them. Their need to communicate paves the way for language acquisition to take place. As experts suggest, there is an innate capacity in every human being to acquire language.

In order to accomplish this translation project, different translation techniques as *direct translation* and *oblique translation*, were applied in order to produce a useful article for Spanish language speakers, especially those who are interested in the topic of first language acquisition.

## 1.2. Objectives

The main objective of this project is to translate the chapter Lexical Acquisition in the early school years from English into Spanish by using some techniques.

This translation project will be carried out in order to provide helpful information that could be beneficial not only for students in the Humanities major, who may find some difficulty when reading and understanding texts in English, but also for the teachers who work for UQRoo or other institutions. Teachers who implement this kind of text will find it beneficial for their particular purpose because it could be more practical for them to explain a text in their own language.

Therefore, the main objectives of this monograph are:

- To provide some benefits as a tool for those students who are interested in working with this kind of topic. (Language acquisition)
- To translate the source text faithfully using the different translation techniques.
- To provide different strategies and translation techniques used in this type of text.



### 1.3. Justification

The present project will be useful for students and teachers of the University of Quintana Roo, especially those who are in Humanities majors. The translation of the chapter *Lexical acquisition in the early school years* from the book *Language Development across Childhood and Adolescence* will be helpful not only for students but also for teachers.

Dr. Edith Hernandez, who is a professor in the University of Quintana Roo, assigns this chapter as one of the readings in her Humanities classes for future teachers in this area, but the problem is that some students do not have the basic level in English so they cannot understand the text.

On the other hand, this text has not been translated before, which makes it more complicated for those students. The idea is to facilitate the information contained in this specific reading, so that they can find it easily, foster their knowledge and may result in a better professional performance. Other Spanish-speaking professors and students of linguistics and language acquisition outside UQRoo can also benefit from this translation.

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## II.- REVIEW OF THE LITERATURE

### 2.1. Definition of Translation

In this section mainly we are going to focus on what *translation* is and why it is important in this project.

Jenny (2013, 1) asserts the following:

A theory in the English-Speaking world regards Translation as simple and straightforward exercise in which a word in one language is replaced by a word in another language, regardless of the type of text, its purpose or its readership.

Asuncion and Silva (2007, 7) put forward four short definitions of *translation*; however, they are easy to understand:

1. - The expression of the same idea in a different language, retaining systematically the original sense.
2. - Expression of meaning in other, especially simpler words.
3. - To change into a different form, substance or state.
4. – The process or result of changing from one appearance, state or phase to another.

In a widely used definition of what translation, Darwish (2003, 21) argues that

The centre of any definition of translation must be the intention to convey a written message from one language to another. The conveyance of the message consists essentially of converting the verbal expression of that message in one language into a corresponding verbal expression in the other language. So basically Translation is both the process and the result of converting the verbal expression in one language (source

language) into an equivalent or counterpart verbal expression in another language (target language).

Nowadays, English is becoming one of the most important languages in the world, so the importance of translation is to understand other languages as cross-cultural event so that it can be an interaction between two or more cultures.

When you start to translate a text of any kind, you need to be very careful not to change the idea of the original text. That is, you need to follow some “rules of translation”. Snell-Hornby (as cited in Tytler, 1978, 17) states the following ones:

- I. That the translation should be a complete transcript of the ideas of the original work.
- II. That the style and manner of writing should be of the same character with that of the original.
- III. That the translation should have all the ease of the original composition.

Venuti (2012, 64) states that

There are three kinds of translation. The first acquaints us with the foreign country on our own terms; a plain prose translation is best for this purpose. A second epoch follows, in which the translator endeavour to transport himself into the foreign situation, but actually only appropriates the foreign idea and represents it as his own. The third epoch of translation is the final and the highest of the three. In such periods, the goal of the translation is to achieve perfect identity with the original.

## 2.2 Translation Techniques

There are different techniques to translate a text and this is very important because as Mahmoud Ordudari (2007) said “Translation typically has been used to transfer written or spoken second language text to equivalent written or spoken target language texts.” He added, “In general, the purpose of translation is to reproduce various kind of text in another language and thus making them available to wider readers.”

Translation techniques relate to whole text, that is, exist some methods to translate a text in order to be easiest to the translator identify the problems he/she could face in the whole text.

For instance, Vinay and Darbelnet, (1995, 31) gives different techniques and procedures which give us a widely idea on how we can apply them. The main division is between direct and oblique techniques.

### 2.2.1 Direct translation Techniques

In the direct method, it is possible to transpose the source language message element by element into the target language, because it is based on either *Parallel categories*, in which we can speak of structural parallelism, or *Parallel concepts*, which are the result of metalinguistic parallelism.

Zanier, (2001) establishes that Direct Translation in both languages have parallel grammatical categories and the message is expressed in the same way. He adds that there are three types of *Direct Translation*.

## **1. - Borrowing**

In order to introduce the flavour of the source language (SL) culture into a translation, foreign terms may be used. (Vinay & Dalbarnet, 1995)

Linguistic Borrowing implies the use of a loan word = A word in the source language does not exist in the target language, and so it must be borrowed from the source language:

Example: Café, Menú, Garage, Chofer, Spaghetti, Pizza, Tequila, etc. These words generally refer to one specific sector of human activities.

These words are adapted from one language to another and it is very common for people to use them.

## **2. - Literal Translation**

Literal, or word for word, translation is the direct transfer of a SL text into a grammatically and idiomatically appropriate target language (TL) text in which the translator's task is limited to observing the adherence to the linguistic servitudes of the TL.

Literal Translation is a unique solution which is reversible and complete in itself. It is common when translating between two languages of the same family. (Vinay & Darbarnet, 1995, 34)

This kind of translation even when it is flexible to translate word by word has some exceptions to translate word by word, as in the following example by Zanier, 2001

### **1. - The sense changes**

It's all Greek to me = Está en Chino. As we see here. When translating into Spanish we do not produce a word-for-word translation, but we keep the sense.

2. - There is a different sense.

A red herring = Una pista falsa. Here when translating in English into Spanish we notice that the word red herring is not the same as in the Spanish translation. Because in Spanish red is “rojo” and herring is “arenque” (a small fish). So, it changes to “pista falsa” not “un rojo arenque”.

3. - Structural reasons prevent it

She ran out screaming = Salió corriendo y gritando.

4. – There is no similarity between the terms in two different languages.

Rubbish = Tonterías / Sister-in-law = Cuñada

### 3. - Calque

A calque is a special kind of borrowing whereby a language borrows an expression from another but then translates literally each of its elements. (Vinay & Dalbarnet, 1995). For example, the Spanish “rascacielo” is a calque of the English “skyscraper” (*rasca* means “it scrapes” and *cielo* means “sky”). It can also be a literal translation of a lexical item of the source language, with an adaptation to the morphology of the target language. The word is borrowed from the source language, and its elements are translated literally. For example:

Basketball/ Baloncesto

Hot dog / perro caliente

Science fiction / Ciencia Ficción

### 2.2.2. Oblique Translation Techniques

Oblique Translation Techniques are used when there are some difficulties to translate directly as the target language and it suffers some alterations in the grammatical structures which are not often identical. This may happen because of structural and metalinguistic differences; certain stylistic effects cannot be transposed into the TL without upsetting the syntactic order, or even the lexis.

Oblique translation techniques include:

- Transposition
- Modulation
- Reformulation or Equivalence
- Adaptation
- Omission
- Addition

#### 1. Transposition

It is the modification of the grammatical category of a part of the sentence without semantic variation. Grammatical structures are not often identical in different languages (Zainier, 2001).

For example: "She likes swimming" translates as "Le gusta nadar" (not "nadando")

## 2. Modulation

Modulation is a variation of the form of the message, obtained by a change in the point of view. This change can be justified when, although a literal. Or even transpose, translation results in grammatically correct utterance, it is considered unsuitable, unidiomatic or awkward in the target language. Moreover, the type of modulation which turns a negative SL expression into a positive TL expression is more often than not optional, even though this is closely linked with the structure of each language.

For example: it is not difficult to show it... Es fácil demostrarlo

## 3. Equivalence

It is the relationship between a source text and a target text that allows the target text to be considered as an exact translation of the source text. Equivalence is supposed to define translation and vice versa =circularity of the definition. Zanier, A. ( 2001)

As a result, most equivalence is fixed, and belongs to a phraseological repertoire of idioms, clichés, proverbs, nominal or adjectival phrases, etc.

## 4. Adaptation

When there is no common equivalence for a given expression, or when a situation in the source culture does not exist in the target culture.

L1 (First Language) is used on those cases where the type of situation being referred to by the SL message is unknown in the TL culture. It generally refers



to used equivalents of idioms, proverbs, idiomatic expressions, title of books and movies.

#### 5. Omission

Omission makes what is explicit in the source text implicit in the target text. Omission in Spanish translation is more common when translating from Spanish to English because grammatical forms such as articles and possessives are used less in English.

#### 6. Addition

This technique is when it is written extra information in the target language that source language was not explained. Also when is given greater importance in the target text through emphasizing what is said in the source language. Addition is more common when translating from English to Spanish because of the need to amplify the pithy English phrases that are marked by a preponderance of adjectives and nouns.

These are some techniques that could be helpful for this project because with these, the translation of the article will be easier to perform. The use of these techniques will provide a better translation in some parts where it is necessary to implement these types of procedures.

### III.- METHOD

According to Fareed K. (2015),

It is said that there are as many translations as there are languages in the world which reminds us of the need and importance of the art of translation. The importance of translation emerges by the reason that it is one of the important disciplines being very much useful in various spheres of human activities. Besides, a large number of languages spoken or written all over the world, and, as such, an individual would not like to be confined to one language or the native language only, but preferably would be interested to learn different language for a specific purpose.

In this case, to do a translation work, we need to know which suitable tools could be helpful for us as a researcher (in my case as a translator) because we cannot change the sense of what the original text tries to express. During my process in this translation monograph, it is important to mention that the main tool is going to be a computer, which provides many benefits like online glossaries and dictionaries.

Ulitkin (2011, 1) proposes the following:

Two or three decades ago the work tools of a translator included a typewriter and a collection of printed dictionaries, which are not difficult to handle. However, as a result of incredibly rapid progress in the field of electronic hardware and computer software, nowadays an important component of any translator's professional competence is the technological one, which, first of all, assumes skills in handling electronic resources and tools.

A good example of doing this translation on the internet is by using *wordreference* which is very useful to check a word of whose meaning you are not sure. Google translator is another useful tool; even though it does not translate as well as we need for this project, it can provide an initial translation that can then be improved by the translator. There are also electronic dictionaries such as the English Language Dictionary, of Collins-Birmingham University International Language Database.

One of the best wonderful tools is teachers who can help in this project, especially those teachers who are translators, because they should have a better idea of what word is available for this kind of text.

I also needed to find some interesting Spanish-language books that are related to the topics in the chapter of the book "Lexical Acquisition" because I think in that way I was able to understand more about the topic. Reading more about the topic also helped me to have more technical vocabulary to use in my translation.

To conclude with the translation of the chapter, I analyzed all the techniques used during this monograph project. I did this by keeping a journal where I recorded all instances of the use of the techniques, difficulties when using them, and the ways those difficulties were addressed.

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## IV TRANSLATED TEXT

Adquisición de léxico en los primeros años escolares

Julie E. Dockrell y David Messer

Introducción

Las primeras palabras de los niños marcan el comienzo de un viaje léxico que dura toda la vida. Durante este viaje, ellos pasan velozmente de aprendientes a usuarios competentes del vocabulario. La aparente facilidad de este proceso ha llevado a la sugerencia de que "el aprendizaje de vocabulario es un asunto relativamente simple" (Plunkett y Wood en prensa). Sin embargo, adoptamos una postura diferente. Argumentamos que la adquisición léxica es un proceso complejo y prolongado que involucra la integración de conocimientos fonológicos, semánticos, sintácticos y morfo-sintácticos con procesos cognitivos y sociales. El conocimiento del vocabulario es un fuerte predictor del éxito académico, y juega un papel central en el desarrollo cognitivo, especialmente en relación con la alfabetización y el aprendizaje (Cunningham y Stanovich 1997; Stanovich y Cunningham 1993). El léxico es un campo privilegiado para el estudio de la interacción entre el contexto y la cognición, y las formas en que esta interacción cambia con el desarrollo. Abordamos estos temas considerando los factores que juegan un papel en el desarrollo léxico temprano (Sección 1), examinando las formas en que los diferentes procedimientos de evaluación proporcionan perspectivas contrastantes de las capacidades de los niños (Sección 2), teniendo en cuenta el soporte para el aprendizaje de vocabulario en la escuela (Sección 3), y los retos y las dificultades típicos del aprendizaje del vocabulario tardío (Sección 4 y 5).

## 1.1 ¿Qué es lo que hay que adquirir?

Cuando los niños adquieren una nueva palabra, deben identificar el sonido en el flujo del habla para codificar una representación fonológica y luego establecer una asociación entre la palabra y el mundo; en última instancia, se desarrolla una representación semántica para el nuevo término junto con el conocimiento de sus características morfo-sintácticas. Las representaciones fonológicas imprecisas reducen la precisión de las producciones léxicas de los niños y también pueden obstaculizar el establecimiento inicial de las representaciones semánticas (sección 4.1).

El aprendizaje de una nueva palabra también implica la formación de enlaces hacia un dominio conceptual. Un niño debe aprender que "ovejas" denota una serie específica de animales, y que "feliz" denota una clase particular de emociones. La clave para la adquisición de léxico es la asociación entre el mundo, el significado y la forma. La cuestión de cómo los niños establecen una asociación mundo-significado-forma ha sido objeto de numerosas investigaciones (Bloom 2000). Muchos de los estudios implican que este es un proceso simple, donde todo lo que se necesita es la selección del referente a partir de una variedad de estímulos. Sin embargo una asociación entre un objeto o series de objetos y una forma es insuficiente por sí sola para desarrollar una representación semántica; los niños deben también integrar el nuevo término con su léxico existente (Anglin 1993; Clark 2003; Dockrell y Campbell 1986).

Hasta el momento no tenemos una comprensión clara de las formas en que el aprendizaje de palabras en niños pequeños difiere del aprendizaje de palabras

en niños mayores y adultos. Las respuestas a estas preguntas requieren evaluaciones más sofisticadas que las que comúnmente se aplican con los niños más pequeños. Las habilidades de aprendizaje de vocabulario de los niños mayores dependen tanto de la exposición que reciben como de su competencia cognitiva y lingüística.

## 1.2 La "asociación rápida" y las limitaciones en la adquisición temprana del léxico.

En estudios experimentales, los niños pequeños adquieren información sobre el significado de un término nuevo después de una sola exposición de su uso (Carey 1978; Heibeck y Markman 1987). Este proceso, a menudo descrito como "asociación rápida" o "aprendizaje incidental rápido" (Rice 1990), ha llevado a los investigadores a centrarse en los factores cognitivos que subyacen este tipo de aprendizaje (Markman 1989; Markman y Hutchinson, 1984). Estas investigaciones generalmente implican el aprendizaje de palabras en situaciones donde se hacen contrastes entre un objeto nombrado y otro sin nombrar, y en las cuáles el término nuevo se contrasta con un término conocido. Una explicación común del éxito temprano de los niños en estas asociaciones es que las restricciones incorporadas limitan las hipótesis que los niños formulan (Golinkoff et al. 1994). Algunas de estas restricciones son abandonadas con el tiempo, pero nunca se especifica cuándo y por qué tales restricciones dejan de operar. Clark (2003) presenta un análisis cuidadoso que cuestiona la viabilidad de cada una de estas restricciones (véase también Nelson 1988).

Se han hecho varias propuestas sobre las restricciones en la asignación de un significado temprano, pero hay poco acuerdo sobre (1) de donde vienen, (2) cuando empiezan a aplicarse y su duración, y (3) porque son abandonadas. (Clark 2003; 138).

La adquisición tardía de vocabulario plantea nuevos retos para estas discusiones. Gran parte del aprendizaje de vocabulario tardío implica términos para entidades y relaciones que no son definibles mediante el uso de mecanismos explicativos derivados de los estudios con los términos de vocabulario concretos. Los niños más grandes se encuentran con palabras que son abstractas, de baja frecuencia, del registro general o de registros específicos, y que implican significados no literales (Nagy et al 1993; Nippold et al. 1993). Además, no hay un conjunto único de relaciones semánticas o una sola estructura organizativa que sea adecuada para todo el lexicón mental (Miller y Fellbaum 1991). A medida que los niños maduran, estos diferentes aspectos de la representación semántica se vuelven cada vez más importantes, pero la presencia de restricciones no permite explicarlos fácilmente (sección 4.2).

### 1.3 Más allá de las asociaciones rápidas y las restricciones.

Las distinciones conceptuales influyen en los significados de algunas palabras (Soja et al. 1991). Sin embargo, cada vez hay más pruebas de que, en algunos campos léxicos, la construcción de categorías ocurre bajo una orientación lingüística (Bowerman y Choi 2003). Niños de tan sólo 17 meses de edad hablan sobre eventos espaciales de manera idiomática (Choi y Bowerman



1991) y también es evidente la presencia de pautas idiomáticas específicas en la comprensión (Choi et al., 1999). Estas diferencias son consistentes con las formas en que las lenguas meta parten los campos semánticos. Por lo tanto, las asociaciones palabra-mundo que los niños empiezan a establecer son sensibles a las propiedades semánticas y estadísticas de la lengua meta (Bowerman y Choi 2003: 402). Como corolario, el input lingüístico puede dirigir las hipótesis de los niños sobre la referencia meta de un nuevo término. Los niños preescolares expuestos a objetos etiquetados con una palabra nueva en la que se describían los objetos como poseedores de propiedades típicamente asociadas con artefactos, generalizaron el término con base en las similitudes en la forma. En contraste, cuando los mismos objetos fueron descritos mediante viñetas en términos de propiedades asociadas con clases animadas, los niños extendieron las mismas etiquetas con base en similitudes tanto en forma como en textura (Booth y Waxman, 2002). Estas diferencias en los patrones de extensión observados sólo pueden ser atribuidas a la información conceptual de las viñetas, ya que los mismos objetos se presentaron en ambas condiciones. Por lo tanto, las distinciones conceptuales que guían las interpretaciones de nuevos términos son afectadas por el idioma que están aprendiendo y por las formas de presentar los nuevos términos.

El contexto social más amplio es una fuente importante de información que guía el aprendizaje de palabras y proporciona una gama de información más compleja que la que sugieren las restricciones.

La construcción de un vocabulario se fundamenta en escuchar palabras e interpretar el significado de un término en un entorno específico (pero véase Hoff y Naigles 2002, para un reanálisis de la investigación, que arroja dudas

sobre la suficiencia de los enfoques sociales para el aprendizaje de palabras). Los bebés de tan sólo 18 meses de edad reúnen de forma activa la información social para guiar sus inferencias sobre el significado de palabras (Bloom 2000) y este proceso continúa siendo una fuente de información importante acerca de los significados de términos nuevos a medida que los niños se van desarrollando (Clark y Wong 2002). Por ejemplo, los niños aprenden mejor un nuevo verbo si se introduce cuando el evento es inminente y no cuando ya está en curso (Tomasello y Kruger 1992). Esto apunta a la importancia de la coincidencia en los tiempos de exposición, que varía para diferentes clases de palabras. También se refiere a la confianza de los niños pequeños en las intenciones de sus interlocutores (Baldwin 1991) y su capacidad de comprender el conocimiento que otros poseen para guiar el aprendizaje de palabras (Sabbagh y Baldwin 2001)

Otro problema con los estudios de asociación rápida es que generalmente no tienen en cuenta la manera en que se establecen las relaciones semánticas, particularmente en el caso de términos abstractos. La vinculación con un referente observable no es lo único que hay que aprender del significado de una palabra, ya que las palabras se refieren claramente a una serie de entidades, sólo algunas de las cuales son observables. Así lo demostró un estudio de simulación de aprendizaje de vocabulario (Gillette et. Al., 1999), donde los adultos se presentaron con diferentes tipos de información lingüística y no-lingüística sobre una interacción madre-hijo que introdujo un sustantivo o un verbo como palabra meta. Un factor clave en la exactitud de la identificación de la palabra meta era la "concreción" o "abstracción". Los autores interpretan esto como que existe una ventaja para los sustantivos sobre los verbos en el

vocabulario inicial de los niños (Gillette et al 1999: 154) y concluir que sólo se puede identificar un número limitado de sustantivos únicamente en términos de referencia a sus contextos extra-lingüísticos normales de uso (es decir, "emparejamiento palabra-significado"); la identificación de verbos, por el contrario, también requiere la inspección de los contextos lingüísticos normales de uso ("emparejamiento enunciado-significado"). Estos hallazgos son consistentes con el hecho de que la complejidad sintáctica en el input parece apoyar el aprendizaje del léxico (Hoff y Naigles 2002).

Los estudios de asociación rápida arrojan luz sobre aspectos importantes de las estrategias para el establecimiento de referencias iniciales, pero no logran proporcionar una visión profunda sobre la naturaleza de las representaciones semánticas y cómo éstas cambian con el tiempo. Las hipótesis iniciales de los niños sobre el significado de las palabras surgen de una serie de factores: las estrategias cognitivas iniciales que se utilizan para limitar los posibles referentes de una palabra, factores pragmáticos, el contexto extralingüístico y las características tipológicas del input lingüístico. Es de suma importancia tomar en cuenta este conjunto de factores ya que, al aumentar la edad, el vocabulario se vuelve a la vez más extenso y detallado, y los niños encuentran la misma palabra en diferentes circunstancias. Para proporcionar descripciones adecuadas de los procesos de adquisición, también es importante tener en cuenta la forma en que se evalúa la competencia léxica.

## 2. La evaluación del vocabulario

Existe un consenso general de que los aumentos significativos del vocabulario se producen en la infancia. Sin embargo, hay un debate considerable sobre el tamaño del vocabulario y la tasa de aprendizaje de "nuevos elementos léxicos" (Anglin 1993). Las estimaciones del tamaño del vocabulario dependen de una serie de factores, específicamente de los criterios para establecer que un niño "sabe" el significado de una palabra. Una distinción básica se puede hacer entre las medidas de comprensión y de producción. Los niños más pequeños tardan más tiempo para establecer una representación exacta de la producción (Clark 1993), y esta asimetría entre la producción y la comprensión parece ser particularmente pronunciada para los verbos (Gillett et. Al 1999). Sin embargo, las representaciones iniciales de la comprensión pueden no ser detalladas y, en algunos casos la comprensión va retrasada con respecto al uso productivo (Nelson, 1996: 306 a 307). A continuación se revisan algunos de los problemas de evaluación del vocabulario infantil en desarrollo en relación con la asimetría entre comprensión y producción (Sección 2.1), y se proponen métodos alternativos para hacer frente a estas dificultades (sección 2.2).

## 2.1 Comprensión y producción en la evaluación

Las medidas de comprensión tienen como objetivo aprovechar las representaciones semánticas de los niños. Estas se pueden utilizar para establecer los límites de la adquisición del vocabulario tardío o las relaciones dentro del campo semántico. Se necesita comprensión para el reconocimiento de palabras y para proporcionar pautas para la producción.

Clark (1993) sostiene que las representaciones de la comprensión consisten en un patrón acústico al que los niños añaden progresivamente más información; por lo tanto, uno de los aspectos de la comprensión en el desarrollo del vocabulario es considerar la forma en que la información se asocia con el patrón acústico (Sección 4.1). Las medidas de comprensión tienen el potencial de contribuir a nuestra comprensión de las estructuras semánticas.

La producción adecuada se basa en una amplia gama de habilidades de comprensión incluyendo la selección de la representación semántica apropiada para el ítem, para la representación fonológica, y para el uso de la palabra en una forma adecuada al contexto lingüístico adecuado. Se ha estimado que las medidas del tamaño de vocabulario pueden subestimar lo que el niño sabe en realidad (Dapretto y Bjork 2000), porque tales medidas se apoyan en la precisión fonológica además del conocimiento semántico y gramatical.

Además, cuando se considera la producción, es importante tomar en cuenta que los niños practican nuevas palabras antes de la creación de representaciones semánticas detalladas y precisas (Clark 2003; Nelson 1996) y hay situaciones en que las palabras pueden ser producidas con poca o ninguna comprensión de su significado. En efecto, se argumenta que, para términos

abstractos, los niños inicialmente participan en el "uso sin significado" en contextos específicos (Levy y Nelson 1994; Nelson 1996).

La producción también es vulnerable a otras exigencias de la tarea. Podría haber una variedad de etiquetas alternativas y aceptables para un elemento o acción. Un niño puede etiquetar la imagen de un perro como "perro", pero "can" o "animal" son igualmente correctos. Las acciones pueden ser etiquetadas con verbos en general para todo uso, tales como "hacer", y si bien estos son menos precisos que los verbos específicos, a menudo son producciones aceptables. Por lo tanto, es pertinente tomar en cuenta el contexto pragmático para evaluar los tipos de elementos léxicos que los niños producen y esto es especialmente evidente en las conversaciones. No obstante, es posible considerar la capacidad de producir una palabra en el contexto apropiado como el "estándar de oro" del conocimiento léxico, y ver los errores de producción como instancias reveladoras de las representaciones semánticas de un niño (Braisby y Dockrell 1999; McGregor y Waxman 1998). Como describimos a continuación, el conocimiento del vocabulario se puede evaluar de muchas formas con el fin de que los datos de comprensión y producción ofrezcan puntos de vista complementarios sobre las representaciones léxicas.

## 2.2 Métodos alternativos de investigación del conocimiento de las palabras.

Una forma típica de medición de conocimiento de las palabras es por medio de un formato de opción múltiple, en la que el niño selecciona una imagen para una palabra meta de entre varias fotografías (para niños pequeños) o palabras escritas (para niños mayores). Estos procedimientos son problemáticos, ya que están abiertos a adivinar el uso de estrategias no lingüísticas para identificar ítems, en particular cuando no hay un criterio claro para la selección de los distractores (Anglin 1993).

También es el caso que las opciones presentadas a los niños en estas tareas pueden no proporcionar información útil sobre la naturaleza de sus representaciones semánticas. Desde 1942, Cronbach señaló la necesidad de determinar de forma completa la comprensión que los aprendientes tienen de una palabra. Las tareas de comprensión de opción múltiple dan una visión "plana" del vocabulario, como si todas las palabras fuesen igualmente conocidas o desconocidas en el mismo nivel. Tales medidas pueden ser vistas como "inútiles en el mejor de los casos y peligrosas en el peor" (Kameenui et al 1987: 138). Idealmente, el conocimiento de las palabras debe ser evaluado usando distintas mediciones (Beck y McKeown 1991), y éstas deben tener en cuenta tanto la calidad como la cantidad del conocimiento léxico de los niños.

Las definiciones son una manera de evaluar el conocimiento explícito de los niños acerca de los atributos semánticos de una palabra. Antes de la edad de siete años, las definiciones de los niños son simples, y tienden a centrarse en la información perceptual o funcional (Benelli et al 1988; Storck y Looft 1973), carente de términos superordinados (Watson 1995). Por el contrario, los niños

mayores producen definiciones que son más precisas, incluyendo información social convencional (Benelli et al., 1988), y se refieren cada vez más a los términos superordinados (Curtis 1987; Snow 1990, Watson 1995). En conjunto, esta investigación apunta a un aumento en el contenido semántico y la forma sintáctica en varias clases de palabras. Curiosamente, los niños generalmente proporcionan definiciones de mayor calidad para los sustantivos que para los verbos y adjetivos, y para las raíces y los compuestos que para las palabras morfológicamente declinadas o derivadas (Anglin 1993; Johnson y Anglin 1995). Por lo tanto, las definiciones proporcionan una herramienta potencialmente poderosa de investigación, ya que evalúan las representaciones semánticas, demuestran el progreso del desarrollo, y muestran los efectos de clase de palabras. Sin embargo, las definiciones le imponen al sujeto una pesada carga cognitiva. La comprensión inicial de una entrada léxica es implícita y hay dificultades significativas en la expresión de este conocimiento. Por lo tanto, las definiciones requieren de conciencia metalingüística y dependen de otras habilidades lingüísticas más allá del conocimiento del lexicón mental. Con la edad, los niños hacen un mayor uso del análisis morfológico en el procesamiento de vocabulario desconocido, un proceso descrito como *solución del problema morfológico* (Anglin 1993). Puede parecer que el niño ha aprendido algunas palabras, pero en realidad, el niño puede haber construido un significado a partir de la información morfológica (Ravid, este volumen). Es posible observar procesos generales similares en la habilidad creciente de los niños de utilizar explícitamente palabras para expresar sus ideas sobre otros ámbitos como la ciencia (Karmiloff - Smith 1992; Pino y Messer 1998, 2003).



Otros intentos de aplicar técnicas que aprovechan diversos aspectos de conocimiento del vocabulario se han limitado generalmente a una prueba de eficacia de pequeña escala en estudios experimentales (por ejemplo, Jenkins et al 1984; McKeown et al 1985; Nagy et al 1985). Estos enfoques a menudo se han usado para investigar la amplitud de las representaciones semánticas de los niños, incluyendo el conocimiento de antónimos, sinónimos e hipónimos relevantes (Heibeck y Markman 1987); los atributos semánticos de palabras (Funnell et al, en dictamen); e inferencias de los niños acerca de las dimensiones categóricas de nuevos elementos léxicos (Keil 1983). En conjunto, los diferentes métodos de medición del vocabulario indican que el conocimiento de palabras se necesita definir a lo largo de un continuum que implica varias dimensiones (sección 3.1); evaluar el vocabulario de un niño significa especificar dónde a lo largo del continuum se encuentra un elemento léxico particular en relación con cada dimensión.

El contexto también proporciona a los niños pistas para inferir significado de las palabras. Por ejemplo, Rudel et. al. (1980) pidieron a niños de edades comprendidas entre los 5 y 11 años generar sustantivos en cuatro condiciones diferentes: denominación de dibujos, definición de sustantivos, completar frases, y nombrar al tocar. La actuación de los niños no varió en todos los contextos, pero a los niños más pequeños se les facilitó completar enunciados y nombrar al tocar, mientras que la definición de sustantivos fue la más difícil para ellos. Estos datos sustentan la postura de que una vez que el conocimiento está plenamente establecido, las respuestas de los niños dependen menos de la tarea y son menos vulnerables al contexto (sección 4.2).

Las tareas en línea ofrecen nuevas formas de evaluar las representaciones léxicas, en particular la organización y enlaces que están presentes entre los ítems léxicos. Las tareas en línea involucran procesos no conscientes en gran medida automáticos y pueden, por lo tanto, ser menos vulnerables al conocimiento metalingüístico. Las tareas simples de denominación de imágenes demuestran que el acceso al léxico se vuelve más rápido a medida que aumenta la edad y se relaciona con la frecuencia de palabras y la edad de adquisición. La presencia de una palabra hablada semánticamente relacionada también aumenta la latencia de nomenclatura, mientras que la presencia de una palabra corta relacionada fonológicamente poco antes de la producción disminuirá la latencia de nomenclatura (Jerger et al., 2002). Por lo tanto, las palabras que son similares en significado interfieren con la búsqueda, mientras que palabras similares en forma fonológica facilitan la denominación. Tales resultados podrían proporcionar información sobre las conexiones entre elementos en el lexicón mental.

En resumen, la naturaleza del protocolo de evaluación es fundamental para las conclusiones que extraemos acerca de las habilidades de los niños y de las representaciones que ellos desarrollan. A medida que los niños se van desarrollando, se pueden usar una serie de técnicas para estudiar la adquisición de vocabulario. Nuestra postura es que, cuando se consideran diferentes dimensiones de conocimiento léxico, emerge una imagen multifacética de desarrollo del vocabulario. Estos perfiles léxicos también pueden proporcionar información importante sobre cómo el apoyo del contexto y la cognición sustentan las representaciones.

### 3. Desarrollo léxico durante la vida escolar.

Al final del período preescolar, los niños poseen una serie de procesos cognitivos, lingüísticos y sociales que sustentan el aprendizaje del vocabulario. Además, el niño de 6 años promedio conoce cerca de 10.000 palabras (Anglin 1993) que le brindan una base para ampliar su vocabulario y "aprovechar con eficacia un contexto social rico en información en el que se produce el aprendizaje de palabras" (Baldwin y Moisés 2001: 318). Sin embargo, queda mucho vocabulario por aprender; los niños de seis años de edad poseen 1/6 parte de las palabras que conocerán para el final de su educación formal (Bloom 2000: 12); y no todos los niños tienen las herramientas necesarias para llevar a cabo esta tarea (Sección 5). La tasa de crecimiento del vocabulario difiere significativamente entre los niños, y los que tienen un vocabulario amplio adquieren más rápido nuevas palabras que los que tienen menos vocabulario (Elley 1989; Leung y Pikulski 1990).

#### 3.1 El Input de la lengua oral

La cantidad y la naturaleza del input lingüístico que los niños reciben tienen un impacto en el desarrollo posterior de su lexicón mental (Hart y Risley 1992, 1995; Hoff y Naigles 2002). La relación entre el input y la adquisición permea toda una gama de situaciones, incluyendo la adquisición bilingüe (Pearson et. Al., 1997). Los tipos de elementos léxicos que los padres utilizan juegan un papel importante, y para algunos niños la oportunidad ambiental para desarrollar el vocabulario es menos abundante que para otros (Weizman y

Snow 2001). Este es un factor importante en el rendimiento escolar: la evaluación del vocabulario en primeros grados de la primaria predice más del 30 % de la comprensión lectora del segundo grado de preparatoria (Cunnungham y Stanovich 1997). Por lo tanto, para los niños procedentes de entornos familiares con menos educación, la exposición a la lengua en contextos educativos es de importancia capital.

A medida que los niños se desarrollan a través de los años escolares, se encuentran con nuevas palabras en contextos educativos y de ocio. La adquisición de léxico se puede apoyar explícitamente, en forma de instrucción directa o por el uso del diccionario, o incidentalmente, en varios tipos de exposiciones y contextos. Poco tiempo se le dedica a la instrucción de vocabulario en las escuelas (Graves 1986, 1987; Nagy y Herman, 1987). Por otra parte, los diccionarios no son adecuados para los niños más pequeños y las definiciones que proporcionan no siempre son fáciles de entender, incluso por los niños de mayor edad (Scott y Nagy 1997); gran parte de la exposición a vocabulario de los niños en edad escolar tiende a producirse incidentalmente. A los niños no siempre se les da la oportunidad de construir un vocabulario amplio en los primeros años escolares. Los resultados de estudios longitudinales indican que las ganancias en habilidades del lenguaje receptivo y expresivo se producen como resultado de la asistencia a guarderías de buena calidad (McCartney et. Al. 1985). Sin embargo, el entorno preescolar suele no ser un buen ambiente para el aprendizaje de vocabulario (McCathren et.al.1995).

Al igual que con los niños más pequeños (Sección 1), el contexto lingüístico donde los niños se encuentran con nuevas palabras influye en las representaciones semánticas resultantes. En un estudio de 130 niños de entre cinco y seis años de edad que duró seis semanas, Ralli (1999) recopiló datos de referencia sobre el conocimiento del vocabulario de niños expuestos al nuevo elemento de vocabulario en una de cinco condiciones: (i) la repetición de la palabra desconocida, (ii) una definición ostensible, (iii) la introducción de una palabra usando un contraste léxico, (iv) una definición que incluía una descripción del ítem, y (v) una condición sin exposición. La semana siguiente los niños escucharon una historia que incluía "la nueva palabra", y se evaluaron sus conocimientos del tema en una variedad de tareas. Tanto el grupo de contraste léxico como el grupo de definición desarrollaron detalladamente los términos nuevos. El grupo de definición descriptiva tenía el conocimiento más detallado y este conocimiento se mantuvo a través del tiempo. Ralli encontró también que el desempeño de los niños varió en función de la medida utilizada para evaluar el conocimiento de las palabras: todos los grupos tuvieron un buen desempeño en la medida de comprensión, pero sólo aquellos grupos de definición y contraste léxico proporcionaron información categórica sobre los nuevos términos y los utilizaron en la producción durante una tarea de narración de historias. El grupo de repetición y el de control no se diferenciaron, y ambos se desempeñaron mal en las tareas semánticamente más exigentes. Estos hallazgos destacan la importancia de los tipos de exposiciones que los niños normalmente reciben en las escuelas e indican que las definiciones orales informales proporcionan a los niños conocimientos duraderos sobre los nuevos elementos léxicos.

El aprendizaje de palabras se ha examinado en otros contextos, como cuando los maestros les leen a los niños (Elley 1989; Penno et al 2002). Como demostró el estudio de Ralli (1999), resaltar explícitamente el significado de las palabras (Penno et al 2002) y la instrucción directa (Stahl y Fairbanks 1986) facilitan la adquisición de vocabulario. La adquisición de vocabulario también se facilita si los niños participan activamente en una historia en lugar de simplemente escuchar una „buena“ lectura. (Elley 1989). La lectura interactiva facilita la adquisición de vocabulario en niños de seis y ocho años de edad (Brabham y Lynch - Brown 2002).

La instrucción explícita de vocabulario no siempre se da (Carlisle et. al. 2000). Las observaciones en las clases de ciencias de 4º y 8º grado indican que los profesores rara vez ofrecen instrucción de vocabulario formal sobre palabras desconocidas. Estos resultados se corroboraron en estudios con niños más pequeños. Best (2003) observó clases de ciencias para niños de cinco y seis años de edad. Los maestros también clasificaron el vocabulario utilizado en estas lecciones a lo largo de una escala de conocido a desconocido en la comprensión y la producción. No hubo enseñanza explícita de vocabulario, pero se encontraron mejoras sutiles en la manera de presentar nuevos términos. Los profesores usaban una combinación de claves lingüísticas y no verbales que discriminaban entre los elementos que se consideraban nuevos y los que se creían familiares. La enseñanza explícita del significado de las palabras por consiguiente puede explicar sólo una cantidad limitada del aprendizaje de palabras en el salón de clase.

### 3.2 El input de la lengua escrita

Una vez que los niños comienzan la escolaridad formal, el lenguaje escrito se vuelve cada vez más importante para el aprendizaje del idioma en general y específicamente del vocabulario (Nagy et al 1985; Ravid este volumen; Sternberg y Powell 1983; Tolchinsky, este volumen). Hay pruebas de que las palabras se aprenden en más o menos en el mismo orden en las escuelas, aunque la tasa de desarrollo se determina por el vocabulario inicial de la primera palabra de un niño (Biemiller y Slonim 2001). Algunas estimaciones indican que los niños de diez años pueden estar expuestos a un máximo de un millón de palabras de texto en un año, entre el 15% y el 50% de las cuales pueden ser desconocidas.

La habilidad de aprender palabras a partir de los textos escritos aumenta con la edad. Los niños que saben más palabras son mejores en comprensión de lectura que los niños con poco vocabulario (Nagy y Herman, 1987; Nagy et al 1985; Sternberg 1987) y los buenos lectores desarrollan un vocabulario más amplio que los que leen poco (Carnine et al 1984; Nagy et al. 1985). Los estudios que han investigado el aprendizaje de palabras a partir de textos escritos han manipulado los tipos de exposición, la tasa de vocabulario proporcionado a los participantes, cómo se evalúa el aprendizaje de palabras, y las características de los participantes. Swanborn & de Glopper (1999) llevaron a cabo un metaanálisis de 20 experimentos de aprendizaje incidental de palabras durante la lectura normal; la atención de los estudiantes no se dirigió a la información lexical y había una sola exposición del elemento destino. Encontraron una variación sustancial en los resultados; los métodos de evaluación sensibles al aprendizaje parcial de palabras mostraron mayores ganancias en el aprendizaje de palabras y los alumnos aprendieron más palabras cuando la relación entre el texto y las palabras en estudio fue mayor (Swanborn y de Glopper 1999: 277), sin embargo, la tasa media del aprendizaje de la palabra incidental fue baja. ¿Pueden los niños y jóvenes ser sensibilizados a la clave de términos desconocidos y ser entrenados a usar contexto de manera efectiva? Probablemente sí (Fukkink y de Glopper 1998). La exposición a nuevas palabras, orales y escritas, en las escuelas ofrece una importante fuente de adquisición tardía de vocabulario.

#### 4. Los retos del aprendizaje tardío de vocabulario

La primera exposición de palabras proporciona las bases para el desarrollo de una representación semántica de un término, pero el input siempre es insuficiente para establecer el significado, y el aprendizaje no es inevitable. En esta sección consideramos la manera en que la forma fonológica y la complejidad semántica y morfológica influyen en el aprendizaje de palabras.

##### 4.1 Procesos fonológicos en la adquisición del léxico

Como se señaló anteriormente, la habilidad de los niños para establecer una representación fonológica inicial es fundamental para el desarrollo de las representaciones semánticas subsecuentes. Durante la infancia temprana y media hay una estrecha relación entre la capacidad de los niños para retener nueva información fonológica por períodos cortos de tiempo y sus conocimientos del vocabulario (Gathercole y Adams 1994; Gathercole y Baddeley, 1989). La naturaleza de la relación entre el vocabulario y las tareas de memoria fonológica es un tema de debate. La sensibilidad fonológica puede mejorar la adquisición de palabras fonológicamente desconocidas (Bowey 1996, 2001; de Jong et al 2000), Sin embargo, la conciencia fonológica como tal no puede ser independiente de la habilidad del lenguaje oral (Cooper et al 2002); es decir, los niños con un vocabulario más amplio construyen representaciones fonológicas más detalladas y por lo tanto pueden ser más exitosos en las tareas fonológicas. El papel de las regularidades fonológicas en la adquisición del léxico indica que las secuencias de sonidos comunes se aprenden con mayor rapidez que las secuencias de sonido raros, y que el aprendizaje de palabras de los niños mayores (entre 10 y 11 niños de edad) continúa siendo influenciado por características fonotácticas (Storkel 2001; Storkel y Rogers 2000).



Los niños mayores utilizan su vocabulario receptivo como un andamio para ayudar en la codificación y recuperación de no-palabras con las características de palabras parecidas. Cuando los niños de cuatro años de edad son expuestos a sonidos de palabras similares después de que habían escuchado una palabra original, su producción de ítems mejoró (Demke et al., 2002). La exposición después del aprendizaje ayudó a mantener las huellas fonológicas de las nuevas palabras en la memoria de trabajo, lo que lleva a representaciones más duraderas a largo plazo (Sección 3.1). Las nuevas palabras con muchos sinónimos fonológicos (palabras fonológicamente similares en competencia), después, se deben aprender con mayor rapidez que aquellas que tienen un menor número de sinónimos fonológicos (Metsala 1999).

La información fonológica por sí sola no es suficiente para establecer una asociación léxica. Por ejemplo, la memoria fonológica predice la adquisición de ítems léxicos que se enseñan de manera explícita, pero no la adquisición de los ítems introducidos de manera incidental (Michas y Henry 1994). Esto es consistente con estudios que muestran que la habilidad de los niños en edad escolar para adquirir el significado de términos complejos científicos se vio limitada por dificultades para establecer representaciones semánticas de los nuevos términos. No se encontró ninguna relación entre la memoria fonológica y los patrones de adquisición para la comprensión, producción o evaluaciones de conocimiento de dominio más amplio (Braisby et al., 2001).

#### 4.2 Factores semánticos en la adquisición léxica

Anteriormente se señalaron algunos de los temas sobre la adquisición y evaluación de representaciones semánticas (Sección 3). En esta sección consideramos la forma en que la adquisición de las representaciones semánticas continúa presentando desafíos más allá de los primeros años de los niños. Varios estudios han señalado las dificultades que los niños experimentan en el desarrollo de los significados de términos relacionales y términos mentales (Nelson 1996). En los casos donde no hay una relación obvia entre un término y sus posibles significados, el desarrollo de las

representaciones semánticas es difícil y prolongado. Las representaciones semánticas de los objetos también cambian con el desarrollo.

La complejidad de estos procesos se ilustra con un estudio de los nombres de objetos y el conocimiento del objeto en 288 niños entre las edades de 3, 7 y 11 en relación con cuatro categorías diferentes de objetos – implementos, frutas, verduras, y vehículos (Funnell et. al. presentó). Se encontró que el desempeño de los niños de 6 años es distinto del de los menores de esta edad. Para los niños más jóvenes, su capacidad para nombrar superó sus conocimientos del objeto, mientras que el fenómeno inverso se registró en los niños de más edad lo que indica que el conocimiento de los niños mayores de 6 años tiene una base más conceptual. Estas diferencias en el desempeño variaron entre las categorías. Funnell et al., argumentan que los niños mayores suelen desarrollar sus conocimientos de nuevos objetos en contextos donde el objeto no está presente. Por lo tanto, un niño mayor puede tener una rica representación semántica para la palabra "yate", pero ser incapaz de nombrar con precisión una imagen de un yate.

La existencia de cambios en el estado de representación de elementos léxicos también es sustentada por un estudio realizado por Keil y Batterman (1984). Les presentaron descripciones verbales a niños y luego les pidieron juzgar si un término en particular, como "ladrón" o "isla", se podría aplicar a la descripción. Una descripción contenía información característica y la otra descripción contenía rasgos definitorios. Hubo un énfasis en los rasgos característicos durante el período preescolar avanzando, lo cual cambió hacia un énfasis en la definición de las características a la edad de 9 años. Este cambio de ejemplares individuales a definición de características ocurre a diferentes edades para diferentes palabras, lo que sugiere que la experiencia y la familiaridad juegan un papel central en la evolución de la comprensión de términos de los niños. La naturaleza de estos cambios depende de los dominios semánticos en cuestión.

Las palabras que representan muchos significados también plantean desafíos. Los niños de preescolar entienden el significado primario de las palabras polisémicas, pero adquieren significados secundarios gradualmente durante los años siguientes. (Durkin et al 1985). Esto es consistente con el trabajo más reciente, donde los significados de nivel más bajo se dominan rápidamente mientras los de nivel alto muestran un perfil más prolongado de desarrollo (Booth y Hall 1995). Del mismo modo, la superposición entre las propiedades físicas y psicológicas (como dulce, duro) se logra particularmente con maestría y solamente en la adolescencia (Schechter y Broughton, 1991). Estos estudios demuestran que cuando el sistema cognitivo recibe más carga derivada de la complejidad de las representaciones semánticas, la adquisición de léxico es un asunto más prolongado.

#### 4.3 Factores morfológicos en la adquisición léxica

La complejidad estructural de las formas de la palabra también influye en la adquisición de vocabulario en los niños. La combinación se produce cuando se combinan dos o más raíces de palabras para crear una nueva palabra. Los niños relativamente jóvenes saben mucho acerca de las reglas de combinación, sin embargo, este conocimiento parece estar restringido a combinaciones morfológicamente más simples (Clark y Berman, 1987). Morfológicamente los términos más complejos también tardan más en adquirirse. Anglin (1993) estudió las definiciones de los niños de cuatro relaciones morfológicas diferentes - palabras declinadas, palabras derivadas, compuestos literales y modismos. Los participantes expertos en palabras parecen ser particularmente buenos con combinaciones literales y podrían utilizar el conocimiento derivativo para inferir el significado de nuevas palabras (Freyd y Baron, 1982). La capacidad de utilizar morfología derivativa parece ser "un desarrollo bastante gradual que se extiende a lo largo de los años de la escuela" (Anglin, 1993: 33). Esta capacidad de „solución de problema morfológico" está influenciada por dos factores, el conocimiento de las raíces de palabras y la productividad del sufijo (Bertram et. Al. 2000).

## 5. Dificultades en el aprendizaje del vocabulario

Hemos visto que los factores fonológicos y semánticos tienen un impacto en el aprendizaje tardío de vocabulario. Los estudios de los niños con dificultades en la adquisición del vocabulario; (Dollaghan 1987; Rice et.al. 1990; y Woodsmall 1988) ofrecen una prueba más de cómo estos factores pueden tener un impacto en el desarrollo léxico. Los problemas identificados pueden ser atribuibles a dificultades, ya sea con el proceso de adquisición en sí, o relacionadas con un fracaso en la consolidación y retención de la información en el léxico mental. En las tres secciones siguientes se considera la evidencia que sustenta estos diferentes puntos de vista.

### 5.1 Niños con dificultades de lenguaje

Los niños con Trastorno Específico del Desarrollo del Lenguaje (TEDL, Specific Language Impairment en inglés) tienen habilidades de lenguaje por debajo del nivel que se esperaría con base en sus habilidades no verbales, y su nivel de lenguaje no es atribuible a la audición o a discapacidades neurológicas (Bishop 1997). Los problemas que estos niños enfrentan para comprender y utilizar el lenguaje son muy variados, y hasta ahora no hay un acuerdo generalizado tipológicamente de la condición. Dada la naturaleza variada de estos problemas de lenguaje de los niños, es significativo que muchos parecen tener dificultades con la adquisición de nuevas palabras (Dollaghan 1987).

Rice (1990) ejemplifica bien los problemas con la adquisición léxica que enfrentan los niños con TEDL. Ella y sus colegas usaron una historia presentada a través de la televisión, la cual incluyó palabras nuevas, y evaluaron la adquisición léxica por medio de una prueba de comprensión. El desempeño de los niños con TEDL se comparó con sus compañeros de la misma edad cronológica (EC, chronological age en inglés) y Longitud Media de Expresión (LME, mean length of utterance en inglés). El desempeño de los niños de 5 años de edad con TEDL fue menor que el de los controles de

emparejamiento de EC y LME en tareas de comprensión. Rice et. al. (1994) reportan que los niños con TEDL, a diferencia de sus compañeros con CE y LME, no lograron adquirir palabras después de 3 exposiciones, pero al igual que sus compañeros tuvieron éxito después de 10 exposiciones.

Por lo tanto, los niños con TEDL tienen una mayor dificultad que sus compañeros en la adquisición de nuevas palabras y verbos que plantean problemas específicos (Kelly 1997; Windfuhr et al 2002). Al parecer, algunos niños con TEDL son menos capaces de hacer uso de la asociación palabra - mundo. Es probable que esto haga difícil y prolongado un mayor desarrollo del sistema del lenguaje durante la edad preescolar y escolar. Las razones por las que estos niños tienen dificultades con la adquisición lexical aún no se entienden. En las siguientes dos secciones consideramos los resultados que sugieren que los problemas con entradas léxicas podrían ser resultado de representaciones fonológicas y semánticas inadecuadas.

## 5.2 La adquisición de léxico y las representaciones fonológicas

La capacidad de nombrar imágenes se puede utilizar como una evaluación básica de que un elemento léxico se ha adquirido (Sección 2). Los niños con dificultades de alfabetización cometen más errores en las tareas de nombramiento de imágenes discretas que los lectores calificados (Scarborough 1989;.. Snowling et al 1988) ¿Por qué debería haber este vínculo entre la adquisición léxica y habilidades de alfabetización? Se ha demostrado que las representaciones fonológicas inadecuadas e imprecisas hacen que sea más difícil de aprender la asociación entre grafemas y fonemas (Snowling et al 1988;.. Swan y Goswami 1997). La evidencia de representaciones fonológicas imprecisa o "borrosa" se proporciona en estos estudios por un alto rango de errores fonológicos al nombrar, más errores de nombres con palabras largas que con las más cortas, y la ocurrencia de errores de nombres en comparación con los niños con capacidades semánticas similares.

Por lo tanto, la falta de adquisición de especificaciones fonológicas completas de las palabras en el léxico mental parece tener consecuencias que van más allá de la dificultad para la comunicación oral. Las puntuaciones bajas en las tareas de conciencia fonológica y en las evaluaciones de memoria a corto plazo fonológico implican que la percepción y el almacenamiento de la información fonológica son las causas de las dificultades de los niños. En otras palabras, las limitaciones de procesamiento de la información interactúan con la exposición a información externa para influir en la adquisición de léxico, y esto tiene consecuencias importantes para el desarrollo.

### 5.3 Adquisición de léxico y representaciones semánticas

Los niños con dificultades para encontrar palabras (DEPs, word finding difficulties en inglés) (German 1984) son capaces, al escuchar una palabra, de identificar la imagen apropiada en una prueba de comprensión, pero a veces son incapaces de producir la misma palabra espontáneamente durante el discurso o cuando se presenta con una imagen del objeto. Incluso cuando producen la palabra adecuada, muchas veces tienen un mayor tiempo de respuesta que los niños de la misma edad cronológica o hablantes de otro idioma (Dockrell et. Al., 2001). Una serie de estudios apoya la opinión de que las DEPs son una consecuencia de representaciones semánticas inadecuadas o incompletas (Kail y Leonard 1986). Los niños de siete años de edad con problemas de dificultades para encontrar palabras (DEPs) dieron definiciones menos precisas de nombres de objetos que los grupos de control y proporcionaron un menor número de rasgos semánticos en sus definiciones (Dockrell et al., 2003). Cuando los niños usan verbos, hacen un mayor uso de todos los verbos generales y escogen opciones inadecuadas de otros dominios semánticos (Dockrell et al., 2001). Los niños con dificultades para encontrar palabras (DEPs) también tienen un mal desempeño en las pruebas en que se les pide que mencionen tantos elementos como sea posible que correspondan a un elemento identificado. (Messer et. al., en prensa).

Los problemas de estos niños para acceder a un nombre de un elemento se pueden atribuir a alguna falla en la adquisición de representaciones semánticas. La investigación sobre un grupo relacionado de niños refuerza esta interpretación. Los estudios realizados por Nation, Snowling, y sus colegas identificaron un grupo de niños que ellos llamaron "de comprensión escasa". Los niños de 10 años de edad con estas características tienen dificultades para hacer uso de la información semántica cuando leen (Nation y Snowling 1998). También tienden a ser más lentos y menos precisos en la nomenclatura de imágenes que sus compañeros (Nation. Et. Al 2001). Sin embargo, los niños tienen un desempeño relativamente bueno en las tareas fonológicas y en la decodificación durante la lectura. Esto sugiere que las representaciones fonológicas inadecuadas de palabras no son la causa de sus dificultades. En cambio, sus problemas pueden atribuirse, de acuerdo con Nation y Snowling (1999) a las representaciones semánticas inadecuadas. En consecuencia, en este grupo de niños, al igual que en los niños con DEPs, parece que la alteración de la adquisición del léxico lleva a dificultades para procesar información donde el conocimiento de las relaciones semánticas podría ayudar a los niños a ser más eficientes y más precisos.

Estos estudios sugieren que el desarrollo de los niños se pone en riesgo por los impedimentos que implica la adquisición de léxico. Los estudios también sugieren que estos efectos pueden ocurrir en subcomponentes del proceso de adquisición del léxico que involucran información fonológica y semántica.

## 5.4 Resumen

En esta sección se han tratado las dificultades en la adquisición de léxico; se ha brindado información sobre el desarrollo de los niños con discapacidad, sobre los niños normales, y acerca de los modelos de adquisición léxica. Los niños con TEDL tienen menos probabilidad que sus compañeros de la misma edad e idioma de ser capaces de seleccionar el referente de las palabras que han escuchado previamente en un contexto apropiado. Estos no son los únicos problemas que podrían retrasar directamente el desarrollo del vocabulario; la presencia de un léxico pobre también puede afectar aún más la adquisición de léxico (Sección 3). Las nuevas palabras pueden ser más difíciles de integrar en una red léxica menos sofisticada. Otros estudios sobre el proceso de nombramiento indican que hay niños que tienen empobrecida la información fonológica o semántica en su léxico mental. Los resultados llaman la atención sobre las consecuencias generales de la incapacidad de adquirir representaciones estables de una palabra, y plantean interrogantes sobre los mecanismos responsables de estas dificultades. Los resultados también apuntan a la vulnerabilidad de los componentes específicos de adquisición de léxico.

## 6. Conclusiones

En este capítulo se consideraron las formas en que el contexto y los factores cognitivos apoyan el aprendizaje del léxico tardío. El aprendizaje de las palabras a veces se ha visto como una simple vinculación de palabra por palabra que se establece principalmente a través del acceso a un contexto extralingüístico. Pero tal punto de vista no tiene en cuenta la gama de factores que tienen un efecto y que juegan un papel en la adquisición. Estos incluyen el contexto social más general de la situación, la información lingüística suministrada con la nueva palabra, la sofisticación del léxico mental existente en los niños y la capacidad de los niños de detectar y retener información relevante a partir de la exposición a la nueva palabra. La perspectiva simplista de la adquisición tampoco toma en cuenta la naturaleza y los tipos de información del léxico que los niños adquieren y por consiguiente soslaya la



necesidad de una serie de evaluaciones para entender completamente la naturaleza del proceso de adquisición.

A medida que los niños progresan a través de los años escolares, es evidente que la creciente sofisticación del léxico mental les permite adquirir nuevas palabras más fácilmente y con menos necesidad de apoyo contextual. Como resultado, los niños que tienen estructuras léxicas más desarrolladas son más capaces de añadir nuevas palabras de mejor manera a estas estructuras del léxico ya desarrolladas. Otra de las características del desarrollo es que, a pesar de que la adquisición lleva a un incremento de la cantidad y complejidad de la información almacenada en el léxico mental, esto se asocia con un acceso más fácil a la información. Por ejemplo, los niños se vuelven más rápidos para nombrar, y mejores para proporcionar definiciones más complejas. También parece que la experiencia de la escolarización puede facilitar estos procesos, aunque los profesores no siempre ofrecen las circunstancias óptimas para el aprendizaje de nuevas palabras.

Como señala Anglin "la adquisición de vocabulario es un proceso notable que necesitamos entender mejor" (1993: 185). Para lograr este objetivo es necesario recopilar información sobre los factores que influyen en la adquisición del léxico y desarrollar modelos más integrales del proceso (Gentner, 2003). Se han hecho avances considerables en la comprensión de la adquisición de la información fonológica sobre las palabras y el desarrollo de modelos de este proceso (Sección 4.1). Por el contrario, todavía hay muchas incertidumbres acerca de la naturaleza de las representaciones semánticas y morfo-sintácticas en el léxico mental. La adquisición de léxico mental es un proceso complejo, y el léxico mental aumenta en complejidad a medida que los niños crecen. Se necesita más investigación para producir un modelo de adquisición del léxico que refleje la complejidad del proceso.

## V ANALYSIS

In the process of translating the chapter “Lexical Acquisition in the Early School Years”, I encountered some issues that we need to take into account because of the difficulties involved in translating some words or phrases. The techniques that were mentioned before were fundamental to solve those problems.

This is an academic book that talks about language acquisition. Therefore, it was necessary to consult dictionaries, teachers and even some forums that have relation with the topic because the words or phrases found on it are not used in daily life. However, the techniques used in the present translation helped me to have a better notion of the topic. Many times we may translate a phrase literally and do not take the time to think if the translation is being carried out is the most suitable or conveys the author original message.

The following analysis has the examples from both, English (the source language) and Spanish (the target language) so that it will be easier for readers to understand the differences that were found in this translation.

We are going to begin with the Direct Translation techniques. These techniques involve word-by-word translation and each word in the original text has a parallelism or is similar to the target language. They are: borrowing, literal and calque. Then we are going to analyse the Oblique translation techniques; those are used for items that are difficult to translate because of their grammatical structure. They are: Transposition, Modulation, Reformulation or Equivalence, Adaptation, Omission and Addition.

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- **Borrowing**

The following technique shows the words that are taken directly from another language, which means if people introduce a word or phrase from one language into another, that word is taken or accepted without changes.

For example: tacos.

Source	Target Language
<b>Both the amount and the nature of the language <u>input</u> children receive impact on the subsequent development of their lexicon (Hart &amp; Risley 1992, 1995; Hoff &amp; Naigles 2002).</b>	La cantidad y la naturaleza del <u>input</u> lingüístico que los niños reciben tienen un impacto en el desarrollo posterior de su lexicón mental (Hart y Risley 1992, 1995; Hoff y Naigles 2002).

As this project is academic and it has relation with linguistics context, the word input is used in this field. *Input*, in this case is all the linguistic information that children receive. For example, when a teacher teaches a L2, the students learn vocabulary, which is one part of the input.

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- **Literal**

In this method, the literal translation is the one that needs to maintain the original word or phrase without any changes in its structure, form or style. However, it is not always appropriate because the meaning could undergo some changes in what it is transmitted and may not be understandable or convey a different idea in the source language to the target language. For

example, the following common Spanish idiom “Te estoy tomando el pelo” would be translated literally in English as „I’m taking your hair” if the translation was made word by word, but it does not have the same meaning in the target language. So, we have to look for the equivalence, which is „I’m just pulling your leg”.

We have some examples of literal translation that are going to be analyzed.

Source	Target Language
<p><b>A child must learn that ‘sheep’ denotes a <u>specific set of animals</u>, and that ‘happy’ denotes a <u>particular class</u> of emotions. The key to lexical acquisition is the mapping between world, meaning, and form.</b></p>	<p>Un niño debe aprender que "ovejas" denota una <u>serie específica</u> de animales, y que "feliz" denota una <u>clase particular</u> de emociones. La clave para la adquisición de léxico es la asociación entre el mundo, el significado y la forma.</p>
<p><b>A <u>basic distinction</u> can be made between measures of comprehension and measures of production.</b></p>	<p>Una <u>distinción básica</u> se puede hacer entre las medidas de comprensión y de producción.</p>
<p><b>A <u>typical way</u> of measuring Word knowledge is by means of a <u>multiple-choice format</u>, in which the child selects a picture for a <u>target word</u> from among several pictures (for <u>younger children</u>) or written words (for <u>older children</u>).</b></p>	<p>Una <u>forma típica</u> de medición de conocimiento de las palabras es por medio de un <u>formato de opción múltiple</u>, en la que el niño selecciona una imagen para una <u>palabra meta</u> de entre varias fotografías (para <u>niños pequeños</u>) o palabras escritas (para <u>niños mayores</u>).</p>
<p><b>With age, children make greater use of <u>morphological analysis</u> in processing unfamiliar vocabulary, a process described as <u>morphological problem- solving</u> (Anglin 1993.)</b></p>	<p>Con la edad, los niños hacen un mayor uso del <u>análisis morfológico</u> en el <u>procesamiento de vocabulario desconocido</u>, un proceso descrito como <u>solución del problema morfológico</u> (Anglin 1993).</p>

Those examples show us that they were translated word by word because all the words of the source language were taken into the target language. Now, it is important to translate the text, the best way the readers can understand it. When the readers do not understand what was translated, all effort made to translate the text may be useless. Moreover, not just the translation of text it is important, but also to convey the sense of the text and determine which words are appropriated to be kept and to not change the meaning from the original text.

Another point that we need to take into account is that English and Spanish have differences in adjective placement. In the analysis both are underlined to a better understanding, here are some examples:

„*Specific set*’ in English and in Spanish ‘*serie específica*’: As we notice, set is the noun and it comes before the adjective specific, that happens on the other way around in Spanish, first it is the noun serie then the adjective específica.

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- **Calque**

This is a type of borrowing and it consists of taking the word or phrase and translating literally each element from the source language to the target language. We are going to analyse the following examples:

Source	Target Language
<b><u>The question of how children establish a word-world mapping</u> has been the subject of considerable research (Bloom 2000)</b>	<u>La cuestión de cómo los niños establecen</u> una asociación mundo-significado-forma ha sido objeto de numerosas investigaciones (Bloom 2000).
<b><u>Preschoolers</u> who were exposed to <u>objects</u> labelled with a novel word where the objects were described in vignettes as having properties typically associated with <u>artifacts</u>, generalized the term on the basis of familiarities in shape.</b>	Los niños <u>preescolares</u> expuestos a <u>objetos</u> etiquetados con una palabra nueva en la que se describían los objetos como poseedores de propiedades típicamente asociadas con <u>artefactos</u> , generalizaron el término con base en las similitudes en la forma.

The example below shows us how calque is used. Even though the word *question* has a different meaning than „pregunta” in Spanish, In this case *question* was translated as *cuestión*, meaning *matter* in Spanish. Also, we notice that the phrase is translated literally, taking each word underlined. In the former table, we see some words that are used as calque because they are translated literally and do not suffer any changes.

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- **Transposition**

This is type of translation where parts of speech change their sequence when they are translated. It is when the word class changes its meaning. Grammatical structures are often different in different languages. Transposition is often used between English and Spanish because of the preferred position of the verb: for example in English the verb is often at the beginning of the sentence, not the same as in Spanish where sometimes happens at the end in the sentence. Working in this project we needed to know that it was possible to replace a word category in the target language without altering the meaning of the source text.

Source	Target Language
<b><u>Learning</u> a new word also involves the information of or links to a conceptual domain.</b>	<u>El aprendizaje</u> de una nueva palabra también implica la formación de enlaces hacia un dominio conceptual
<b>As children mature , these different aspects of semantic representation become <u>increasingly important</u>, but are not <u>easy explained</u> by the presence of constraints (section 4.2)</b>	A medida que los niños maduran, estos diferentes aspectos de la representación semántica se vuelven <u>cada vez más importantes</u> , pero la presencia de restricciones no permite <u>explicarlos fácilmente</u> (sección 4.2).

The first example is one that occurs a lot when translating from English into Spanish. We notice that “learning” a gerund in English but when we translate this into Spanish, it must be changed to a noun phrase: “El aprendizaje”.

On the other hand, “increasingly important” is working as an adjective phrase and when we translate it into Spanish “increasingly” which is an adverb become

in Spanish as a complex noun phrase “cada vez más importante” The same occurs in the following example:

Are not easily *explained*... “explain” as participle because it is used with the auxiliary verb “are”.

No permite explicarlos facilmente... “explicar” becomes a verb.

In the following example, we notice that the words underlined in source language constitute the entire subject, whereas in Spanish it is a passive pronominal.

Source	Target Language
<b><u>Some of the issues concerning the acquisition and assessment of semantic representations are noted earlier (section 3).</u></b>	Anteriormente <b><u>se señalaron</u></b> algunos de los temas sobre la adquisición y evaluación de representaciones semánticas (Sección 3).

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- **Modulation**

We also need to apply techniques that best fit with the context. When two languages are as different culturally and linguistically as English and Spanish, the translator needs to see what the best translation for both languages is, and he or she can choose the best way of representing the same idea. It means that the source and the target text are different but represent the same idea for both. Modulation exists when two languages are different in culture and the words may not have a perfect equivalence one to another. However, when the text is translated to the target language the meaning does not change.



Source	Target Language
<b>And not all children are equally <u>well equipped</u> for the task (Section 5).</b>	y no todos los niños tienen <u>las herramientas necesarias</u> para llevar a cabo esta tarea (Sección 5).

This phrase is an adjective phrase “well-equipped” that means having sufficient equipment, supplies, or abilities but as we notice the translation is not the same without relation with the source text. So the equivalence of the phrase is not literal but the reader could understand clearly as *herramientas necesarias*.

Source	Target Language
<b>During this journey they move from apprentice word learners to competent vocabulary users <u>at a remarkable rate</u>.</b>	Durante este viaje, ellos pasan <u>velozmente</u> de aprendientes a usuarios competentes del vocabulario.

In the example above, “at a remarkable rate” is a prepositional noun phrase whereas “velozmente” in Spanish is an adverb. As we notice the lexis and the grammar is very different but the meaning is the same when we translated in the target language.

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- **Reformulation or Equivalence**

Even though it may be confused with the modulation technique, equivalence is the one that expresses an idea in a completely different way in the target language. The meaning is the opposite of literal translation. This takes place with slogans or advertising, proverbs, idioms, clichés, nominal or adjectival phrases and the onomatopoeia of animal sounds.

Source	Target Language
<b>The question of how children establish a <u>word–world</u> mapping has been the subject of considerable research (Bloom 2000)</b>	La cuestión de cómo los niños establecen una asociación <u>mundo-significado-forma</u> ha sido objeto de numerosas investigaciones (Bloom 2000).

In this example we notice that is an adjective phrase *word –world*, which is modifying the noun mapping, but if we translate it literally may have no sense so the equivalence is *mundo-significado-forma* which is part of the subject matter in the target language.

Equivalence also refers to terms such as terminology of a field of knowledge where there might not be an exact translation, but in the target language there is an equivalent, as in the following example:

Source	Target Language
<p><b><u>Children with Specific Language Impairment (SLI) have language skills below the level that would be expected on the basis of their non – verbal abilities, and their level of language is not attributable to hearing or neurological disabilities (Bishop 1997)</u></b></p>	<p><u>Los niños con Trastorno Específico del Desarrollo del Lenguaje (TEDL, Specific Language Impairment, SLI por sus siglas en inglés) tienen habilidades de lenguaje por debajo del nivel que se esperaría con base en sus habilidades no verbales, y su nivel de lenguaje no es atribuible a la audición o a discapacidades neurológicas (Bishop 1997).</u></p>
<p><b><u>The performance of children with SLI was compared with peers matched for chronological age (CA) and <u>mean length of utterance (MLU)</u></u></b></p>	<p>El desempeño de los niños con TEDL se comparó con sus compañeros de la misma edad cronológica (EC, chronological age CA por sus siglas en inglés) y <u>Longitud Media de Expresión (LME, mean length of utterance MLU por sus siglas en inglés).</u></p>

In this example I, as translator, had to search on forums that talk about this field and I found that there is an exact equivalence that refers to the same thing.

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- **Adaptation**

As we have seen before, an adaptation technique is required when there is no common equivalence for a given expression, or when a situation in the source culture does not exist in the target culture. They are also required when the text from the source language to the target language does not work and we have to adapt the message to the target language.

Source	Target Language
<b>In experimental settings, young children acquire information about the meaning of a <u>novel</u> term after a single exposure to its use (Carey 1978; Heibeck &amp; Markman 1987).</b>	En estudios experimentales, los niños pequeños adquieren información sobre el significado de un término <u>nuevo</u> después de una sola exposición de su uso (Carey 1978; Heibeck y Markman 1987).

In this translation the term *novel* was required as an adaptation word because it does not have sense when we translated into the target language. The Spanish adjective *novel* is used to refer to someone who is new at a job and has little experience. Because it does not have sense that the author wants to transmit, the word had to be changed so that the readers can understand in the target language.

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- **Omission**

This is a simple technique where the information in the source language is not relevant when we translate in the target language, so we omit words or even phrases. We are going to analyse some examples where omission method is shown.

Source	Target Language
<b>However, <u>we</u> adopt a different stance, to argue that lexical acquisition is a complex and extended process involving the integration of phonological, semantic, and morpho-syntactic knowledge with cognitive and social processes.</b>	Sin embargo, <u>adoptamos</u> una postura diferente. Argumentamos que la adquisición léxica es un proceso complejo y prolongado que involucra la integración de conocimientos fonológicos, semánticos, sintácticos y morfo-sintácticos con procesos cognitivos y sociales.

<b>Both the amount and the nature of the language input children receive impact on the subsequent development of their lexicon (Hart y Risley 1992, 1995; Hoff y Naigles 2002).</b>	La cantidad y la naturaleza del input lingüístico que los niños reciben tienen un impacto en el desarrollo posterior de su lexicón mental (Hart y Risley 1992, 1995; Hoff y Naigles 2002).
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Even though when we translate literally the phrase “we adopt a different stance” into Spanish, grammatically it is correct but in Spanish we most of the time omit the subject. In this case, the subject in the source text is “We”. This is a typical issue that we face when we translate from English into Spanish.

On the other hand, “Both” in English is referring for two things, in this case it is referring to *the nature and language input*, but they are already there, so in Spanish we do not need to specify those things.

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- **Addition**

This is the last but not the least technique that refers to when there is extra information that was not there in the source language and I as translator of this text needed to take into account what the author wants to transmit in context or in the situation the text is talking about.

Source	Target Language
<b>1.2 ‘Fast mapping’ and constraints in early lexical acquisition</b>	1.2 La "asociación rápida" y las limitaciones en la adquisición temprana del léxico.
<b>In experimental settings, young children acquire information about the meaning of a novel term after a single exposure to its use (Carey 1978; Heibeck y Markman 1987).</b>	En estudios experimentales, los niños pequeños adquieren información sobre el significado de un término nuevo después de una sola exposición de su uso (Carey 1978; Heibeck y Markman 1987).

Those examples show us that in English we can omit the article in the subject of the sentence but in Spanish the article is needed, in the examples the definite article la, las and los were added.

Source	Target Language
<p><b>Children with Specific Language Impairment (SLI) have language skills below the level that would be expected on the basis of their non – verbal abilities, and their level of language is not attributable to hearing or neurological disabilities (Bishop 1997).</b></p>	<p>Los niños con Trastorno Específico del Desarrollo del Lenguaje (TEDL, Specific Language Impairment, SLI <u>por sus siglas en inglés</u>) tienen habilidades de lenguaje por debajo del nivel que se esperaría con base en sus habilidades no verbales, y su nivel de lenguaje no es atribuible a la audición o a discapacidades neurológicas (Bishop 1997).</p>
<p><b>The performance of children with SLI was compared with peers matched for chronological age (CA) and mean length of utterance (MLU)</b></p>	<p>El desempeño de los niños con TEDL se comparó con sus compañeros de la misma edad cronológica (EC, chronological age CA <u>por sus siglas en inglés</u>) y Longitud Media de Expresión (LME, mean length of utterance MLU <u>por sus siglas en inglés</u>).</p>

Because of being acronyms, those examples come from English and they are technical terms in psychology. They were kept because we can compare from the source language to the target language, and the phrase “por sus siglas en ingles” is there to give additional information.

## VI CONCLUSION

As this Project is an academic text, the translation from English into Spanish is not an easy task because you have to take into account many issues that you will face during the work as knowing the translation techniques, grammar structure, etc.

In my personal point of view, English is one of the most important languages around the world and takes an important role in our daily life, as in schools, jobs and even in the streets. However, there are people who do not understand the English language and they need to look for information in their mother tongue. Even though, in the University of Quintana Roo students need to take English as a subject in all the majors but not all students like the language, so for those students this project will be helpful, especially in Humanities major because the topic was given by a professor who teaches in that major. In addition, this project will be a contribution to people who are interested in the subject, not only for students in but outside the University.

Working in translating this text was not easy, even when I have studied English for more than five years in the University; I realized it was not as I daily communicate with people in my mother tongue. The translation is a challenge for people who are beginners in translation; they have to know the techniques because what the authors say we as translators must transmit the same idea without changing the sense.

In my experience, translating this text was a challenge. At the beginning when I started to work on it I faced with terms and structures that I had no idea what was the appropriate translation, I felt desperate, so I needed to ask to a co-worker for help. Also I searched pages on internet to talk about the topic to be familiarized because I think I was translating literally and did not pay too much attention in punctuations which is not allowed at this level. So I will strong recommend whatever you translate pay attention not only in the structure but also in punctuations.

Moreover, I had no a widely idea about how different is English and Spanish because I, as a student of English I thought I knew the grammatical for both of them. The problem is that we do not take the translation techniques which are crucial to apply and express the adequate idea for the readers. What it helped me was when I had a doubt in the structure or the meaning I used some forums to talk about the topic and asked for the meaning and it really helped me. Another problem I faced was when I read the text were some expressions that were not familiar for me at the first time but it was not really the problem because I had to read and re read and then I got the idea. So my recommendation is that when you do not understand a phrase do not desperate and re read it.



In my experience working with this project, I found the easiest translation techniques in literal and calque because they do not suffer many changes. The tools I used were books, dictionaries, forums and teachers. On the other hand, the technique where I needed to pay more attention was modulation, in this part, my advisor was the support towards the comments he gave me, and then I checked again and again.

Finally, this translation project made me know the aspect that translators have to have while working. For example, if you are going to translate a text you have to be very patient because it requires time and dedication to have a good final version.

I would gladly know that this project was very useful for educators and students that are emerged in this field. I hope this translation helps to increase their knowledge not only in translation techniques but also for the topic the chapter was translated.

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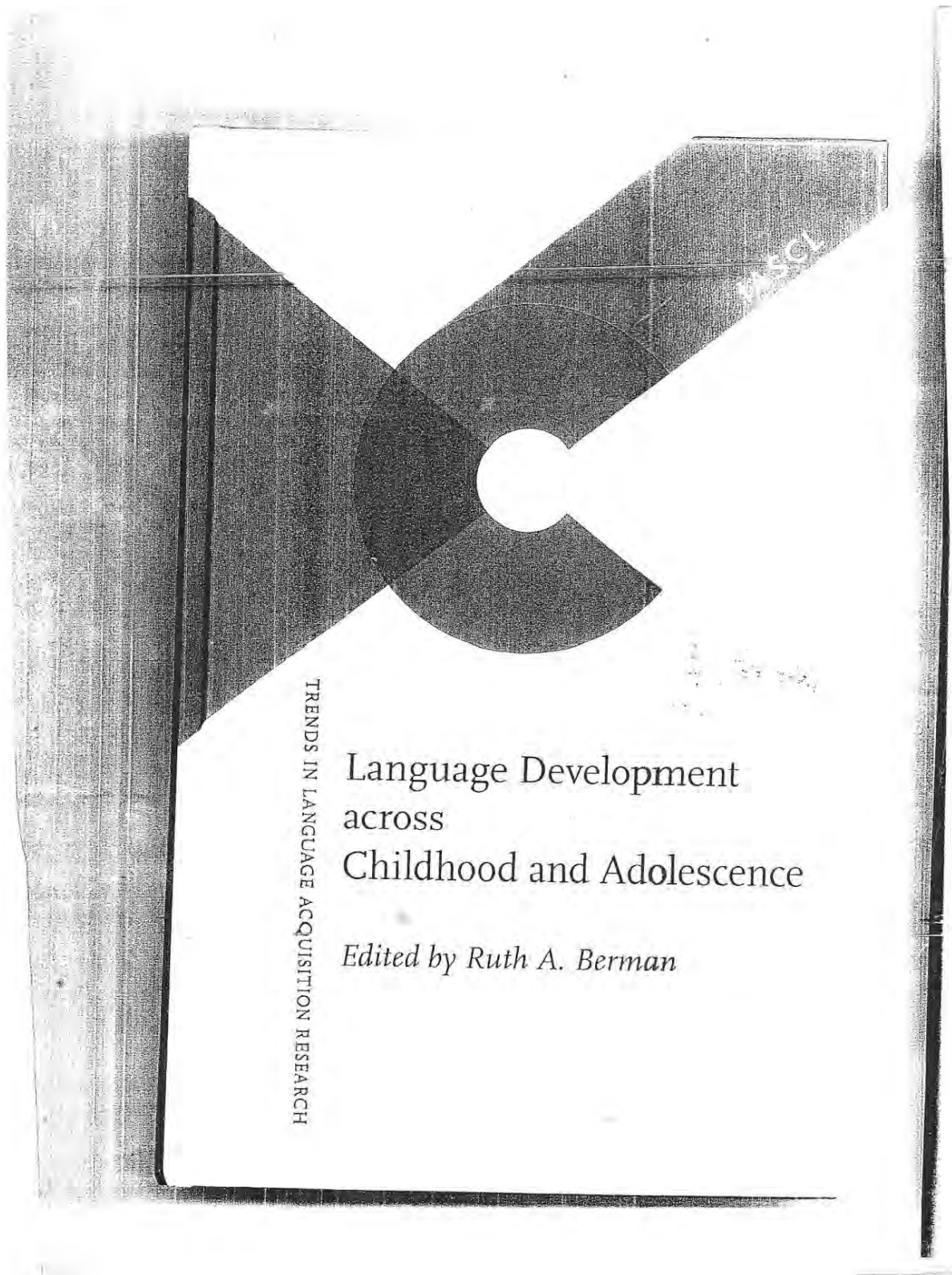
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to be 'productive' when it is rule-bound rather than based on rote-learning of unanalyzed strings; and (2) in language use, processes and structures that are relatively productive are those that are preferred by speakers for expressing particular form/function relations under given circumstances or at a particular point in time (Berman 1987c, 1993b; Clark & Berman 1987).

6. Beard (1993) notes an interesting semantic difference between two classes of denominal adjectives, which he terms 'possessional' and 'similitudinal'. In the former, a *bearded man* is a man who *has* a beard, whereas in the latter, a *friendly man* is one who *is like* a friend. And, more relevant to the contrasts illustrated in (4), compare *buttered toast* 'toast which has butter on it' versus a *buttery cake* 'a cake which is like butter', *iced coffee* / *icy hands*, *flowered material* / *flowery style*.

7. The role of Hebrew verb-pattern morphology in mastering systems of transitivity and voice, detailed in Berman (1993a, 1993b) is disregarded in the present analysis.

8. Ilsa et al. use the term in a rather different, but complementary sense to that of the 'competition' model as articulated, for example, in Bates & MacWhinney (1987), MacWhinney (1985:1089–1149).

9. This is *not* a claim that this knowledge is 'innate' in the strong sense of being genetically encoded in the organism without any interaction with the environment. Rather, this kind of knowledge accords with aspects of brain structure, cognition, and behavior that have been termed 'primal' by some developmental theorists (Elman et al. 1996; Johnson & Morton 1991), in the sense that it is shared by or common to all members of the species, but it develops in interaction with the environment.

10. The term 'universals' as used here does not refer to a given model of grammar or to formal syntactic principles and constraints (so is not identifiable with a Chomskian model of 'UG'). Examples of what were originally termed 'substantive' universals by Chomsky (1965), akin to Keenan's (1975) 'naive universals' include: the distinction between consonants and vowels, between nouns and other word classes, and the preference for encoding certain distinctions in predicates (like those relating to aspect, tense, and mood) and for marking other categories (such as case, gender, and definiteness) on nominal elements (Bybee 1985).

## Lexical acquisition in the early school years\*

Julie E. Dockrell and David Messer

### 1. Introduction

Children's first words mark the beginning of a lifelong lexical journey. During this journey they move from apprentice word learners to competent vocabulary users at a remarkable rate. The apparent ease of this process has led to the suggestion that "learning vocabulary is a relatively simple affair" (Plunkett & Wood in press). However, we adopt a different stance, to argue that lexical acquisition is a complex and extended process involving the integration of phonological, semantic, and morpho-syntactic knowledge with cognitive and social processes. Vocabulary knowledge is a strong predictor of academic success, and it plays a central role in cognitive development, especially in relation to literacy and learning (Cunningham & Stanovich 1997; Stanovich & Cunningham 1993). The lexicon provides a unique domain for studying the interaction between context and cognition, and the ways in which this interaction changes with development. We address these issues by considering the factors that play a role in early lexical development (Section 1), examining the ways in which different assessment procedures provide contrasting views of children's abilities (Section 2), considering the support for vocabulary learning in school (Section 3), and the challenges and difficulties encountered by later vocabulary learning (Sections 4 and 5).

#### 1.1 What needs to be acquired?

When children acquire a new word, they must identify the sound in the speech stream to encode a phonological representation and then establish a mapping between the word and world; ultimately a detailed semantic representation is developed for the new term, with knowledge of its morpho-syntactic features. Inaccurate phonological representations reduce the accuracy of children's lex

ical productions and may also hamper the initial establishment of semantic representations (Section 4.1).

Learning a new word also involves the formation of or links to a conceptual domain. A child must learn that 'sheep' denotes a specific set of animals, and that 'happy' denotes a particular class of emotions. The key to lexical acquisition is the mapping between world, meaning, and form. The question of how children establish a word-world mapping has been the subject of considerable research (Bloom 2000). Many of the studies imply that this is a simple process, where all that is needed is the selection of the referent from an array of stimuli. However, a match between an object or set of objects and a form is insufficient on its own to develop a semantic representation; children must also integrate the new term with their existing lexicon (Anglin 1993; Clark 2003; Dockrell & Campbell 1986).

As yet we have no clear understanding of the ways in which word learning in young children differs from word learning in older children and adults. Answers to these questions require more sophisticated evaluations than those commonly applied with younger children. The word learning skills of older children depend on both the exposure they receive and their cognitive and linguistic competence.

### 1.2 'Fast mapping' and constraints in early lexical acquisition

In experimental settings, young children acquire information about the meaning of a novel term after a single exposure to its use (Carey 1978; Heibeck & Markman 1987). This process, often described as 'fast mapping' or 'quick incidental learning' (Rice 1990) has led researchers to focus on the cognitive factors that underlie such learning (Markman 1989; Markman & Hutchinson 1984). These investigations generally involve word learning in situations where contrasts are drawn between a named and an unnamed object, and in which the novel term is contrasted with a known term. One prominent explanation of children's early success in these mappings is that inbuilt constraints restrict the hypotheses that children entertain (Golinkoff et al. 1994). Some of these constraints may eventually be relinquished, but it is never specified when and why such constraints cease to operate. Clark (2003) presents a careful analysis that questions the viability of each of these constraints in turn (see also Nelson 1988).

Various proposals have been made about constraints on early meaning assignment, but there is little agreement on (1) where they come from, (2) when

they start to apply and how long they last, and (3) why they are abandoned. (Clark 2003: 138).

Later vocabulary acquisition poses further challenges for such accounts. Much of later vocabulary learning involves terms for entities and relations that are not definable using explanatory mechanisms derived from studies with concrete vocabulary terms. Older children encounter words that are abstract, low in frequency, domain-specific and domain-general, and that involve non-literal meanings (Nagy et al. 1993; Nippold et al. 1988). Furthermore, no single set of semantic relations or organizational structure is adequate for the entire lexicon (Miller & Fellbaum 1991). As children mature, these different aspects of semantic representation become increasingly important, but are not easily explained by the presence of constraints (Section 4.2).

### 1.3 Beyond fast mapping and constraints

Conceptual distinctions influence the meanings of some words (Soja et al. 1991). However there is increasing evidence that in some lexical domains the construction of categories occurs under linguistic guidance (Bowerman & Choi 2003). Children as young as 17 months of age talk about spatial events in language-specific ways (Choi & Bowerman 1991) and language-specific patterns are also evident in comprehension (Choi et al. 1999). These differences are consistent with differences in the way target languages partition the semantic domains. Thus, the word to world mappings that children begin to establish are sensitive to the semantic and statistical properties of the target language (Bowerman & Choi 2003: 402). By corollary, specific linguistic input may direct children's hypotheses about the intended referent of a novel term. Preschoolers who were exposed to objects labeled with a novel word where the objects were described in vignettes as having properties typically associated with artifacts, generalized the term on the basis of similarities in shape. In contrast, children extended the same labels on the basis of similarities in both shape and texture when the same objects were described as having properties typically associated with animate kinds (Booth & Waxman 2002). Only the conceptual information provided in the vignettes could be responsible for the differences in extension patterns that were observed since the same objects were presented in both conditions. Thus, the conceptual distinctions that guide children's interpretations of new terms are affected by both the language they are learning and the ways in which the new term is introduced.

The wider social context is an important source of information to guide word learning and provides a more complex range of information than is im-

plied by constraints. Building a vocabulary depends on hearing words and interpreting the meaning of a term in a specific setting (but see Hoff & Naigles 2002, for a re-analysis of research that casts doubt on the sufficiency of social approaches to word learning). Infants as young as 18 months actively gather social information to guide their inferences about word meanings (Bloom 2000) and this process continues to serve as an important source of information about the meanings of new terms as children develop (Clark & Wong 2002). For example, children learn a new verb best if it is introduced when the event is impending rather than when it is already ongoing (Tomaseello & Kruger 1992). This points to the importance of match in timings of exposure, which varies for different word classes. It also relates to young children's reliance on the intentions of their interlocutors (Baldwin 1991) and their ability to understand the knowledge that others possess to guide their word learning (Sabbagh & Baldwin 2001).

Another problem with studies of fast mapping is that they generally fail to consider how semantic representations are established, particularly in the case of abstract terms. There is more to learning the meaning of a word than pairing it with an observable referent, since words clearly refer to a range of entities, only some of which are observable. This is demonstrated by a simulation study of vocabulary learning (Gillette et al. 1999), where adults were presented with different types of linguistic and non-linguistic information about a mother-child interaction that introduced either a noun or a verb as a target word. A key factor in the accuracy of identifying the target word was its 'concreteness' or 'imageability'. The authors interpret this as revealing an advantage for nouns over verbs in the early vocabulary of children (Gillette et al. 1999: 154) and conclude that only a limited stock of nouns can be identified solely in terms of reference to their standard extra-linguistic contexts of use (that is, by 'word-to-world pairing'); verb identification, in contrast, also requires inspection of the standard linguistic contexts of use ('sentence-to-world pairing'). These findings are consistent with the fact that syntactic complexity in the input appears to support lexical learning (Hoff & Naigles 2002).

Fast-mapping studies illuminate important aspects of early strategies for establishing reference, but they fail to provide in-depth insight into the nature of semantic representations and how these change over time. Children's initial hypotheses about word meanings arise from a range of factors including the initial cognitive strategies that are used to limit possible referents, pragmatic factors, extra-linguistic context, and features of the input and target language typology. Consideration of this range of factors is critical as, with increasing age, vocabulary becomes both more extended and more detailed, and children

encounter the same word in varying circumstances. To provide adequate descriptions of acquisition processes it is also important to consider the ways in which lexical competence is evaluated.

## 2. The assessment of vocabulary

There is a general consensus that significant vocabulary gains are made in childhood, yet there is considerable debate about both vocabulary size and the rate of learning 'new lexical items' (Anglin 1993). Estimates of vocabulary size depend on a number of factors, specifically on the criteria for establishing that a child 'knows' the meaning of a word. A basic distinction can be made between measures of comprehension and measures of production. Younger children take much longer to establish accurate representations for production (Clark 1993), and this asymmetry between production and comprehension appears to be particularly marked for verbs (Gillette et al. 1999). However, initial representations for comprehension may not be detailed and in some cases differential understanding lags behind productive use (Nelson 1996: 306-307). Below we review some of the problems involved in assessing children's growing vocabulary in relation to the asymmetry between comprehension and production (Section 2.1), and we propose alternative methods for coping with these difficulties (Section 2.2).

### 2.1 Comprehension and production in assessment

Comprehension measures aim to tap children's semantic representations. They may be used to establish the word boundaries for later acquired vocabulary or the relationships within semantic domains. Comprehension is needed for the recognition of words and to provide templates for production.

Clark (1993) argues that representations from comprehension consist of an acoustic template to which children then add progressively more information; so one aspect of understanding vocabulary development is to consider the way in which information is associated with the acoustic template (Section 4.1). Measures of comprehension have the potential to contribute to our understanding of semantic structures.

Appropriate production draws on a wider range of skills than comprehension including selection of the appropriate semantic representation for the item, instantiation of a phonological representation, and use of the word in its appropriate linguistic form and context. It has been argued that production

based measures of vocabulary size may underestimate what the child actually knows (Dapretto & Bjork 2000), because such measures rely on phonological accuracy in addition to semantic and grammatical knowledge.

In addition, when considering production it is important to realize that children practice new words prior to the establishment of detailed, accurate semantic representations (Clark 2003; Nelson 1996) and there are situations where words may be produced with little or no understanding of their meaning. Indeed it is argued that, for abstract terms, children initially engage in "use without meaning" in specific contexts (Levy & Nelson 1994; Nelson 1996).

Production is also vulnerable to other task demands. There may be a range of alternative and acceptable labels for an item or action. A picture of a poodle can be labeled as a 'poodle', but 'dog' or 'animal' are equally correct. Actions can be labeled with general all-purpose verbs, such as 'do', and while these are less precise than specific verbs, they are often acceptable productions. Thus, the pragmatic context in which productions are assessed will direct the types of lexical items that children produce and this is particularly evident in conversation. Nonetheless, one might view the ability to produce a word in the appropriate context as the 'gold standard' of lexical knowledge and errors of production as particularly revealing about a child's semantic representations (Braisby & Dockrell 1999; McGregor & Waxman 1998). As we outline below, vocabulary knowledge can be assessed in a range of ways so that comprehension and production data offer complementary insights about lexical representations.

## 2.2 Alternative methods of investigating word knowledge

A typical way of measuring word knowledge is by means of a multiple-choice format, in which the child selects a picture for a target word from among several pictures (for younger children) or written words (for older children). These procedures are problematic, since they are open to guessing or the use of non-linguistic strategies to identify items, particularly when the distractors are not selected by clear criteria (Anglin 1993).

It is also the case that children's choices in such tasks may not provide useful information about the nature of their semantic representations. As early as 1942, Cronbach pointed out the need to determine how complete a student's understanding of a word was. Forced-choice comprehension tasks give a 'flat' view of vocabulary, as if all the words are either unknown or known to the same level, to the extent that such measures can be viewed as "useless at best and dangerous at worst" (Kameenui et al. 1987: 138). Ideally, word knowledge should be assessed by a range of different measures (Beck & McKeown 1991), and these

should take into account both the quality and the quantity of children's lexical knowledge.

Definitions are a way of assessing children's explicit knowledge about a word's semantic attributes. Prior to age seven, children's definitions are simple, and tend to focus on perceptual or functional information (Benelli et al. 1988; Storck & Looft 1973), lacking in superordinate terms (Watson 1995). In contrast, older children produce definitions that are more precise, include conventional social information (Benelli et al. 1988), and increasingly refer to superordinates (Curtis 1987; Snow 1990; Watson 1995). Taken together, this research points to an increase in semantic content and syntactic form across word classes. Interestingly, children generally provide higher-quality definitions for nouns than for verbs and adjectives, and for roots and compounds than for morphologically inflected or derived words (Anglin 1993; Johnson & Anglin 1995). Definitions thus provide a potentially powerful investigative tool, since they assess semantic representations, demonstrate developmental progress, and show word-class effects. Yet definitions place a high cognitive load on the respondent. Initial understanding of a lexical entry is implicit and there are significant difficulties in expressing this knowledge. Thus, definitions require meta-linguistic awareness and are dependent on other linguistic skills beyond knowledge of the lexicon. With age, children make greater use of morphological analysis in processing unfamiliar vocabulary, a process described as *morphological problem-solving* (Anglin 1993). Some words may appear to have been learnt but in effect the child may construct a meaning from morphological information alone (Ravid, this volume). Similar more general processes can be seen in children's developing ability to use words explicitly to express their ideas about other domains such as science (Karmiloff-Smith 1992; Pine & Messer 1998, 2003).

Other attempts to apply techniques that tap various aspects of vocabulary knowledge have generally been limited to small-scale tests of their effectiveness in experimental studies (e.g., Jenkins et al. 1984; McKeown et al. 1985; Nagy et al. 1985). Such approaches have often involved investigations of the breadth of children's semantic representations including knowledge of relevant antonyms, synonyms, hyponyms (Heibeck & Markman 1987); the semantic attributes of words (Funnell et al. submitted); and children's inferences about categorical dimensions of new lexical items (Keil 1983). Taken together, different methods of measuring vocabulary indicate that word knowledge needs to be defined along a continuum that involves several dimensions (Section 3.1); evaluating a child's vocabulary means specifying where along the continuum a particular lexical item lies in relation to each dimension.



*Context* also provides children with potential cues for inferring word meaning. For example, Rudel et al. (1980) asked children aged between 5 and 11 years to generate names in four different conditions: picture naming, naming to definition, sentence completion, and naming to touch. The oldest children's performance did not differ across the contexts, but for younger children sentence-completion and tactile naming were the most supportive while naming to definition the hardest. These data add further evidence to the view that once knowledge is fully established, children's responses are less task-dependent and less vulnerable to context (Section 4.2).

*Online tasks* offer new ways to assess lexical representations, particularly the organization and links that are present between items in the lexicon. Online tasks involve largely automatic, non-conscious processes and so may be less vulnerable to metalinguistic knowledge. Simple picture-naming tasks demonstrate that lexical access becomes quicker with increasing age and is related to word frequency and age of acquisition. The presence of a semantically related spoken word also increases naming latency, while the presence of a phonologically related word shortly before production will decrease naming latency (Jerger et al. 2002). Thus, words that are similar in meaning interfere with search while words similar in phonological form facilitate naming. Such findings could provide information about the way in which items are linked together in the lexicon.

In sum, the nature of the assessment protocol is central to the conclusions we draw about children's skills and the representations that they develop. As children develop, a range of techniques are available to study vocabulary acquisition. We will argue that when different dimensions of lexical knowledge are considered, a multifaceted picture of vocabulary development emerges. Such lexical profiles can also provide important insight into how context and cognition support ensuing representations.

### 3. School-based lexical development

By the end of the preschool period, children have a range of cognitive, linguistic, and social processes to support vocabulary learning. In addition, an average 6-year-old knows about 10,000 words (Anglin 1993) which will provide a basis from which to extend their vocabulary and to "capitalize effectively on the information-rich social context within which word learning occurs" (Baldwin & Moses 2001: 318). Yet there is considerable lexical learning to be done; the six-year-old possesses 1/6th of the words that will be known by the

end of formal schooling (Bloom 2000: 12); and not all children are equally well equipped for the task (Section 5). The rate of vocabulary growth differs significantly between children, with larger vocabularies supporting the faster acquisition of new words than ones with smaller vocabularies (Elley 1989; Leung & Pikulski 1990).

#### 3.1 Oral language input

Both the amount and the nature of the language input children receive impact on the subsequent development of their lexicon (Hart & Risley 1992, 1995; Hoff & Naigles 2002). The relationship between input and acquisition holds across a range of situations including bilingual acquisition (Pearson et al. 1997). The type of lexical items that parents use plays an important role, and for some children the environmental opportunity to develop vocabulary is less rich than for others (Weizman & Snow 2001). This is an important factor in school achievement: vocabulary assessed in first grade predicts over 30% of the reading comprehension variance in 11th grade (Cunningham & Stanovich 1997). Thus, for children from less educated or less advantaged backgrounds, the exposure to language received in educational contexts is of critical importance.

As children develop through the school years, they increasingly encounter new words in educational and leisure contexts. Support for lexical acquisition can be provided explicitly, in the form of direct instruction or dictionary use, or incidentally, in varied types of exposures and contexts. Little time appears to be devoted to vocabulary instruction in schools (Graves 1986, 1987; Nagy & Herman 1987). Moreover, dictionaries are inappropriate for younger children and the definitions provided are not always easily understood even by older children (Scott & Nagy 1997); much of schoolchildren's vocabulary exposure tends to occur incidentally. Children are not necessarily given enough opportunities to build a rich vocabulary in the early school years. Findings from longitudinal studies indicate that gains in receptive and expressive language skills occur as a result of participation in quality nursery provision (McCartney et al. 1985). Yet on the whole, preschool settings are not sensitive vocabulary learning environments (McCartney et al. 1995).

As with younger children (Section 1), the linguistic context where children encounter new words influences the resultant semantic representations. In a study of 130 five- and six-year-old children over a period of six weeks, Ralli (1999) collected baseline data about vocabulary knowledge and then had children exposed to new vocabulary items in one of five conditions: (i) repetition

of the unfamiliar word, (ii) an ostensive definition, (iii) an introduction of a word as a lexical contrast, (iv) a definition which included a description of the item, and (v) a no-exposure condition. The following week the children heard a story that included the 'new word', and their knowledge of the item was assessed on a variety of tasks. Both the lexical contrast group and the definition group developed detailed semantic representations of the new terms. The definition group had the most detailed knowledge and this knowledge was maintained overtime. Ralli also found that children's performance varied with the measure used to assess word knowledge: all groups performed well on the comprehension measure, but only those in the lexical contrast and definition groups provided categorical information about the new term and used the term productively in a story telling task. The repetition and control group could not be differentiated, and both performed poorly on the semantically more demanding tasks. This highlights the importance of the types of exposures children typically receive in schools and indicates that informal oral definitions can provide children with enduring knowledge about a new lexical item.

Word learning has been examined in other contexts, such as when teachers are reading to children (Elley 1989; Penno et al. 2002). As was shown by Ralli's (1999) study, explicit highlighting of word meanings (Penno et al. 2002) and direct instruction (Stahl & Fairbanks 1986) facilitate vocabulary acquisition. Vocabulary acquisition is also facilitated if children are actively engaged in a story rather than simply hearing a 'good' reading of it (Elley 1989). Interactional reading facilitates vocabulary acquisition of both six- and eight-year-olds (Brabham & Lynch-Brown 2002).

Explicit vocabulary instruction is not always provided. Carlisle et al.'s (2000) observations of 4th and 8th grade science lessons indicate that teachers seldom offer formal vocabulary instruction about unfamiliar words. These results are corroborated by studies with younger children. Best (2003) recorded science lessons for five- and six-year-olds. Teachers also rated the vocabulary used in these lessons along a scale, from definitely known to unknown for both comprehension and production. There was no explicit vocabulary teaching, but Best found subtle differences in how teachers introduced new terms. It was the combination of linguistic and non-verbal cues provided by the teachers that discriminated between items believed to be new and those believed to be familiar. Explicit teaching of word meanings can therefore explain only a limited amount of classroom-based word learning.

### 3.2 Written language input

Once children start formal schooling, written language becomes increasingly important for learning about language generally and vocabulary specifically (Nagy et al. 1985; Ravid this volume; Sternberg & Powell 1983; Tolchinsky, this volume). There is evidence that words are learned in roughly the same order in school, although the rate of development is determined by a child's initial root word vocabulary (Biemiller & Slonim 2001). Some estimates indicate that ten-year-olds may be exposed to as many as a million words of text in a year, between 15% to 55% of which may be unfamiliar.

The ability to learn words incidentally from written texts increases with age. Children who know more words are better at reading comprehension than children with poorer vocabularies (Nagy & Herman 1987; Nagy et al. 1985; Sternberg 1987) and good readers develop larger vocabularies than poorer readers (Carnine et al. 1984; Nagy et al. 1985). Studies that have investigated word learning from written texts have manipulated the types of exposure, the rationale provided to the participants, how word learning is evaluated, and the characteristics of the participants. Swanborn & de Glopper (1999) carried out a meta-analysis of 20 experiments of incidental word learning during normal reading; students' attention was not drawn to the lexical item and there was a single exposure of the target item. They found substantial variation in the results; assessment methods sensitive to partial word learning showed higher word learning gains and students learnt more words when the ratio of text to target words was higher (Swanborn & de Glopper 1999:277), yet the mean rate of incidental word learning was low. Can children and young people be sensitized to key unknown terms and trained how to use context effectively? Probably yes (Fukkink & de Glopper 1998). Exposure to new words, oral and written, in school offers an important source of later vocabulary acquisition.

### 4. The challenges of later vocabulary learning

Initial word exposures provide the basis for developing a semantic representation of a term but input is often insufficient to establish meaning and learning is not inevitable. In this section we consider how phonological form and semantic and morphological complexity impact on later word learning.

#### 4.1 Phonological processes in lexical acquisition

As noted earlier, children's ability to establish an initial phonological representation is central to the development of subsequent semantic representations. During early and middle childhood there is a close link between children's ability to retain new phonological information for short periods of time and their vocabulary knowledge (Gathercole & Adams 1994; Gathercole & Baddeley 1989). The nature of the relationship between vocabulary and phonological memory tasks is a matter of debate. Phonological sensitivity can enhance the acquisition of phonologically unfamiliar words (Bowey 1996, 2001; de Jong et al. 2000), yet phonological awareness as such may not be independent of oral language skill (Cooper et al. 2002); that is, children with larger vocabularies construct more detailed phonological representations and may therefore be more successful on phonological tasks. The role of phonological regularities in lexical acquisition indicates that common sound sequences are learnt more rapidly than rare sound sequences, and that the word learning of older children (10- and 11-year-olds) continues to be influenced by phonotactic features (Storkel 2001; Storkel & Rogers 2000).

Older children may use their receptive vocabularies as a scaffold to assist in the encoding and retrieval of non-words with word-like characteristics. When four-year-olds were exposed to similar-sounding words after they had heard a novel word, their production of the item was enhanced (Demke et al. 2002). Exposure after learning helped maintain the phonological traces of the new word in working memory, thereby leading to more durable long-term representations (Section 3.1). New words with many phonological neighbors (phonologically similar competitor words), then, should be learnt more quickly than those with fewer phonological neighbors (Metsala 1999).

Phonological information alone is not sufficient to establish a lexical mapping. For example, phonological memory predicts the acquisition of explicitly taught lexical items but not of items introduced in an incidental fashion (Michas & Henry 1994). This is consistent with studies showing that schoolchildren's ability to acquire the meaning of complex scientific terms was limited by difficulties in establishing the semantic representations of the new terms. No relationship was found between phonological memory and patterns of acquisition for comprehension, production, or assessments of wider domain knowledge (Braisby et al. 2001).

#### 4.2 Semantic factors in lexical acquisition

Some of the issues concerning the acquisition and assessment of semantic representations are noted earlier (Section 3). In this section we consider the way that acquisition of the semantic representations continues to present challenges beyond the early years. A number of studies have pointed to the difficulties that children experience in developing the meanings of relational terms and mental state terms (Nelson 1996). In cases where there is a non-obvious relationship between a term and its possible meanings, the development of semantic representations is difficult and extended. The semantic representations of objects also change with development.

The complexity of these processes is illustrated by a study of object naming and object knowledge in 288 children between the ages of 3;7 and 11;6 in relation to four different categories of object – implements, fruits, vegetables, and vehicles (Funnell et al. submitted). Different patterns of performance were evident for the children above 6;6 from those who were younger. For younger children, their ability to name exceeded their object knowledge, while for older children the reverse pattern was true, suggesting that the older children's knowledge was more conceptually based. This shift in performance varied across category. Funnell et al. argue that older children often develop their knowledge of new objects in contexts where the object is not present. Thus, an older child may have a rich semantic representation for the word 'yacht' but be unable to accurately name a picture of a yacht.

A change in representational status of lexical items is also supported by a study conducted by Keil & Batterman (1984). They presented children with verbal descriptions and then asked them to judge whether a particular term, such as 'robber' or 'island', could be applied to the description. One description contained characteristic information and the other description contained defining features. There was a focus on characteristic features during the preschool period moving towards an emphasis on defining features by the age of 9. This shift from individual exemplars to defining features occurs at different ages for different words, suggesting that experience and familiarity play a central role in the evolution of children's understanding of terms. The nature of these changes depends on the semantic domains concerned.

Words that stand for many meanings also pose challenges. Preschool children understand the primary meaning of polysemous words, but acquire secondary meanings gradually over subsequent years (Durkin et al. 1985). This is consistent with more recent work where low-level meanings are mastered rapidly while higher-level meanings show a more protracted profile of devel-

opment (Booth & Hall 1995). Similarly, the overlap between psychological and physical properties (such as *sweet, hard*) is a particularly late attainment with mastery being achieved only in the mid-teens (Schecter & Broughton 1991). These studies demonstrate that when the cognitive system is taxed by the complexity of the semantic representations, lexical acquisition is a more protracted affair.

#### 4.3 Morphological factors in lexical acquisition

The structural complexity of word forms also influences children's vocabulary acquisition. Compounding occurs when two or more root words are combined to create a new word. Relatively young children know a lot about the rules of compounding, yet this knowledge appears to be restricted to morphologically simpler combinations (Clark & Berman 1987). Morphologically more complex terms also take longer to acquire. Anglin (1993) studied children's definitions for four different morphological relations – inflected words, derived words, literal compounds, and idioms. Skilled word learners appeared to be particularly good with literal compounds and could use derivational knowledge to infer the meanings of new words (Freyd & Baron 1982). The ability to use derivational morphology appears to be “a quite gradual development extending throughout the school years” (Anglin 1993:33). This ‘morphological problem solving’ ability is influenced by two factors, the knowledge of root words and the productivity of the suffix (Bertram et al. 2000).

### 5. Difficulties in vocabulary learning

We have seen that phonological and semantic factors impact on later vocabulary learning. Studies of children with difficulties in vocabulary acquisition (Dollaghan 1987; Rice et al. 1990; Rice & Woodsmall 1988) offer further evidence of how these factors can impact on lexical development. The problems identified can be attributable to difficulties with either the process of acquisition itself or to a failure in consolidating and retaining information in the lexicon. In the following three sections we consider the evidence supporting these different views.

#### 5.1 Children with language difficulties

Children with Specific Language Impairment (SLI) have language skills below the level that would be expected on the basis of their non-verbal abilities, and their level of language is not attributable to hearing or neurological disabilities (Bishop 1997). The problems that these children face in comprehending and using language are varied, and as yet there is no generally agreed typology of the condition. Given the varied nature of these children's language problems it is significant that many appear to have difficulties in acquiring new words (Dollaghan 1987).

A good example of the problems with lexical acquisition faced by children who have SLI has been reported by Rice (1990). She and her colleagues used a story presented via television that included novel words and assessed lexical acquisition by means of a comprehension test. The performance of children with SLI was compared with peers matched for chronological age (CA) and mean length of utterance (MLU). The 5-year-old children with SLI performed less well than both CA and MLU matched controls on comprehension tasks. Rice et al. (1994) report that children with SLI, unlike their CA and MLU peers, failed to acquire words after 3 exposures, but like peers were successful after 10 such exposures.

Thus, children with SLI have a greater difficulty than their peers in acquiring new words and verbs pose particular problems (Kelly 1997; Windfuhr et al. 2002). It would appear that some children with SLI are less able to make use of word-world mappings. This is likely to make the further development of the language system during the pre-school and school years more difficult and protracted. The reasons why these children have difficulties with lexical acquisition are not yet understood. In the next two sections we consider findings which suggest that problems with lexical entries may occur as a result of inadequate phonological or semantic representations.

#### 5.2 Lexical acquisition and phonological representations

The ability to name pictures can be used as a basic assessment of whether a lexical item has been acquired (Section 2). Children with literacy difficulties make more errors on discrete picture naming tasks than skilled readers (Scarborough 1989; Snowling et al. 1988). Why should there be this link between lexical acquisition and literacy abilities? It has been argued that imprecise or inadequate phonological representations make it more difficult to learn the mapping between graphemes and phonemes (Snowling et al. 1988; Swan &

Goswami 1997). Evidence of imprecise or 'fuzzy' phonological representations is provided in these studies by a high rate of phonological errors when naming, more naming errors with longer than shorter words, and occurrence of more naming errors in comparison to children with similar semantic abilities.

Thus, failure to acquire the full phonological specifications of words in the lexicon appears to have consequences that go beyond difficulties in oral communication. Low scores on phonological awareness tasks and on assessments of phonological short-term memory implicate the perception and storage of phonological information as the cause of the children's difficulties. In other words, information-processing limitations interact with exposure to external information to influence lexical acquisition, and this has significant consequences for development.

### 5.3 Lexical acquisition and semantic representations

Children with word-finding difficulties (WFDs) (German 1984) are able, on hearing a word, to identify the appropriate picture on a comprehension test, but are sometimes unable to produce the same word spontaneously during discourse or when presented with a picture of the item. Even when they do produce the appropriate word, it often has longer latency than in children of the same chronological or language age (Dockrell et al. 2001). A range of findings supports the view that WFDs are a consequence of inadequate or incomplete semantic representations (Kail & Leonard 1986). Seven-year-olds with WFDs have been found to give less accurate definitions of object names than control groups and provide fewer semantic features in their definitions (Dockrell et al. 2003). When producing verbs they make greater use of general all-purpose verbs and inappropriate choices from other semantic domains (Dockrell et al. 2001). Children with WFDs also perform poorly on tasks where they are asked to name as many items as possible that correspond to an identified target (Messer et al. in press).

The problems of these children in accessing a name of an item can be attributed to a failure to fully acquire semantic representations. Research on a related group of children reinforces this interpretation. Studies by Nation, Snowling, and their colleagues have identified a group of children that they term 'poor comprehenders'. Children with these characteristics who are aged 10 years have difficulties making use of semantic information when reading (Nation & Snowling 1998). They also tend to be slower and less accurate at picture naming than their peers (Nation et al. 2001). The children perform relatively well on phonological tasks and at decoding when reading. This suggests

that inadequate phonological representations of words is not the cause of their difficulties. Instead, their problems are attributed by Nation & Snowling (1999) to inadequate semantic representations. Thus, in this group of children, as in children with WFDs, it appears that impaired lexical acquisition results in difficulties when dealing with information where knowledge of semantic relations could help the children be more efficient and more accurate.

These studies suggest that children's development is put at risk by impairments involving lexical acquisition. The studies also suggest that these effects can occur in sub-components of the lexical acquisition process, those involving phonological information and those involving semantic information.

### 5.4 Summary

This section has concerned challenges to lexical acquisition, and it contains a number of messages about the development of children with disabilities, about typical children, and about models of lexical acquisition. Children with SLI are less likely than language-age matched peers to be able to pick out the referent of words that they previously have heard in an appropriate context. Not only are such problems likely to directly delay vocabulary development, but the presence of an impoverished lexicon may effect further lexical acquisition (Section 3). New words may be more difficult to integrate into a less sophisticated lexical network. Other studies of the naming process indicate that there are children who have impoverished phonological or semantic information in their lexicon. The findings draw attention to the general consequences of a failure to acquire stable representations of a word, and raise questions about the mechanisms responsible for these difficulties. The findings also point to the vulnerability of specific components of lexical acquisition.

## 6. Conclusions

This chapter has considered the ways in which context and cognitive factors support later lexical learning. Word learning has sometimes been viewed as a simple word-to-world pairing that is established predominantly through access to the extralinguistic context. But such a view fails to consider the range of factors that have an effect on and play a part in acquisition. These include the more general social context of the situation, the linguistic information supplied with the new word, the sophistication of the child's existing lexicon, and the child's ability to detect and retain relevant information from the exposure to the new

word. A simple view about acquisition also fails to consider the nature and types of lexical information that children acquire and by corollary the need for a range of assessments to fully understand the nature of the acquisition process.

As children progress through the school years it is clear that the increasing sophistication of the lexicon enables children to acquire new words more easily and with less need for contextual support. As a result, those children who have more developed lexical structures are better able to add to these already developed structures and make further gains. Another feature of development is that even though acquisition results in more information and increasingly complex information being stored in the lexicon, this is associated with easier access to the information. For example, children become quicker at naming, and better at providing more complex definitions. It also appears that the experience of schooling can facilitate these processes, though teachers do not always provide optimal circumstances for the learning of new words.

Anglin stated, "Vocabulary acquisition is a remarkable process and one that we need to understand better" (1993: 185). To achieve this objective we need to collect information about the influences on lexical acquisition and to develop more comprehensive models of the process (Gentner 2003). Considerable advances have been made in understanding the acquisition of phonological information about words and developing models about this process (Section 4.1). In contrast, there are still many uncertainties about the nature of semantic and of morphosyntactic representations in the lexicon. Lexical acquisition is a complex process, and the lexicon increases in complexity as children become older. Further research is needed to produce a model of lexical acquisition that addresses the complexity of the process.

#### Note

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## Derivational morphology revisited

### Later lexical development in Hebrew

Dorit Ravid

#### Introduction

Language development is a lengthy process that interacts intensively with acquisition of literacy. Language acquisition during the school years, here, 'language development', takes place at all linguistic levels – lexical, grammar and pragmatic – and is accompanied by increasing metalinguistic awareness and more abstract and explicit representation of linguistic knowledge. This chapter concerns morpho-lexical knowledge, with the goal of investigating the connection between derivational morphology and development of the mental lexicon and delineating psycholinguistically motivated procedures for evaluating lexical development in different school-age populations.

The chapter focuses on derivational morphology as a semi-productive domain that involves both lexical and pragmatic knowledge (Nagy et al. 1997). A richer and less obligatory domain than inflection, and one that depends directly on an extensive vocabulary, derivational morphology affords rich potential for linguistic evaluation of schoolchildren and adolescents who have already mastered obligatory inflections (Ravid 1995a). Additionally, as discussed in this chapter, derivational morphology requires integrated knowledge of the interrelations between lexical convention, semantic content, and formal structure – literacy-related domains that continue to develop well into school age. Yet to date, derivational morphology has been largely untapped as a source of information on later language development.

The chapter starts with consideration of the mental lexicon (Section 1.1) followed by an overview of factors that contribute to later vocabulary growth (1.2) and discussion of 'the literate lexicon' (1.3). Part 2 focuses on Hebrew derivational morphology (2.0), describing experimental studies with schoolchildren